GSM TELEPHONE

SGH-i780

SERVICE Manual

GSM TELEPHONE



CONTENTS

SAMSUNG
ELECTRONICS

GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com

2008. 01. Rev.1.0

1. Safety Precautions

1-1. Repair Precaution

– Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test, because the specification of cellular phone is sensitive for surrounding interference(RF noise).

– Be careful to use a kind of magnetic object or tool, because performance of parts is damaged by the influence of magnetic force.

– Surely use a standard screwdriver when you disassemble this product, otherwise screw will be worn away.

– Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.

– Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.

– Take specially care of soldering, because Land of PCB is small and weak in heat.

– Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.

– Don't use as you pleases after change other material than replacement registered on SEC System. Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below.
You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.

- Use earthed soldering steel when you connect or disconnect ESD.

- Use soldering removing tool to break static electricity. Otherwise ESD will be damaged by static electricity.

- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.

- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

2. Specification

2-1. GSM General Specification

	EGSM 900	DCS 1800	PCS 1900	W-CDMA 2100
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	0~124 & 975~1023	512~885	512~810	UL:9612~9888 DL:10562~10838
Tx/Rx spacing	45MHz	95MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps (chip rate)
Time Slot Period / Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	QPSK (DL) HPSK (UL)
MS Power	33dBm ~ 5dBm	30dBm ~ 0dBm	30dBm ~ 0dBm	24dBm ~ -50dBm
Power Class	4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)
Sensitivity	-102dBm	-100dBm	-100dBm	-106.7dBm
TDMA Mux	8	8	8	
Cell Radius	35Km	2Km	2Km	2Km

2-2. GSM TX power class

TX Power control level	GSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3 dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

TX Power control level	PCS1900
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

3. Product Function

Main Function

— Homescreen
— PIM - Contacts, Calendar, Tasks, Voice Note
— Messaging - SMS, MMS, Email, VoiceRecorder within MMS
— Windows Live! Portal
— Windows Update
— Email Setup Wizard
— Internet Explorer
— Multimedia capability - 2 Mega Pixel / VGA Camera, Camcorder, Windows Media Player
— Zoomer
— Dialer
— Video Telephony
— Accessary Applications - Alarms, Calculator, NotePad, Task Manager, Smart Converter, World Clock, Stopwatch, Smart Search
— Active Sync
— Bluetooth
— WIFI
— Document Viewer
— T9
— File Manager, My Item
— Java
— Pod Casting, RSS Reader
— Games (Solitarie, Bubble breaker)
— MTV
— Postcard
— Google Map

4. Array course control

4-1. Software Adjustments

There is 2 set to download the binary image into your device.

[First set]



1. JIG BOX (UMTS TEST JIG: GH80-03308A)
2. USB Cable : JIG to PC
3. Test Cable : JIG to SGH-i780 (GH39-00890A)
4. Power Cable : JIG to power supply
5. Serial Cable : SGH-i780 to PC
6. Power Supply
7. RF Cable : SGH-i560 to Agilent 8960 or CMU200 (GH39-00599A)
8. Test Cable : JIG to SGH-i780 (GH39-00886A)

[Second set]



1. USB DATA Link Cable : GH39-00922A
2. Battery : GH43-02969A

4-2. Software Download

4-2-1. Pre-requisite for Download

- Downloader Program (there are 2 ways to download.)
  - **[Image version].exe (Single downloader)**
  - **SGH_i780V_version.exe (Multi downloader)**
- SGH_i780V Mobile Device
- USB Driver
  - **PDA : Samsung MITs USB Sync [Samsung MITs USB Sync.zip]**
  - **Phone : Samsung CDMA Modem [Samsung CDMA Modem.zip]**
- Driver Installation.
  - **PDA**

  Make sure that you install drivers.

  If you installed the latest ActiveSync program, you don’t need to install the pda driver. Please install the latest ActiveSync program.

  - **Phone**

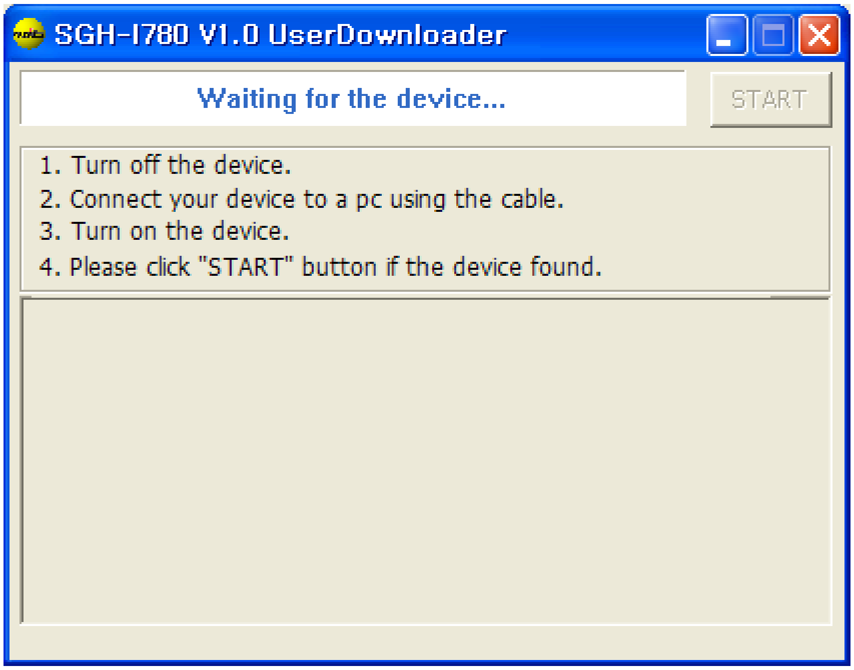
  When you download the phone image, you need the driver of Samsung CDMA Modem.

  If you want to download the phone image, install the Samsung CDMA Modem driver.

  After you install the driver of Samsung CDMA Modem, please restart a host computer.

4-2-2. Single download ([Image version].exe)

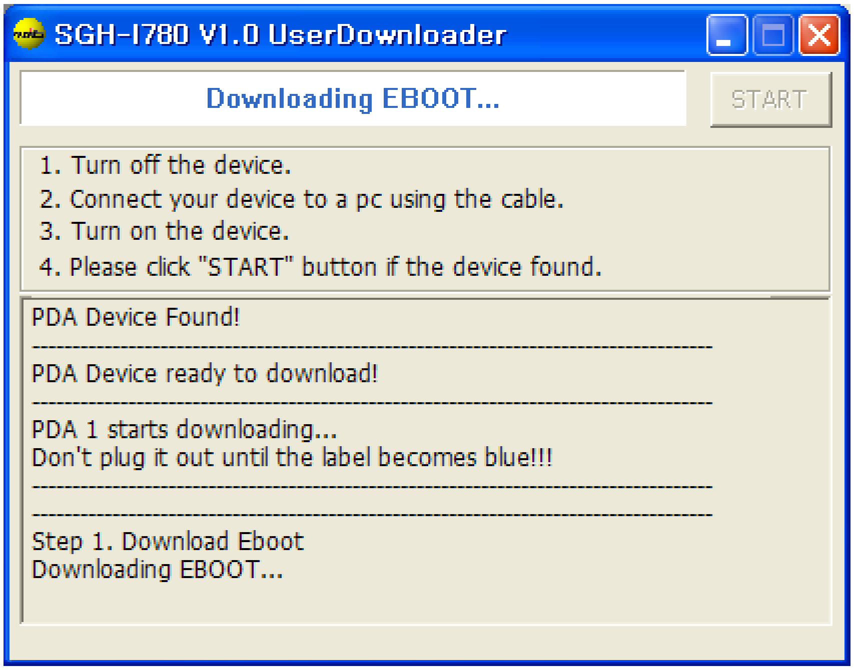
1. Execute the Downloader Program. [Image Version.exe]



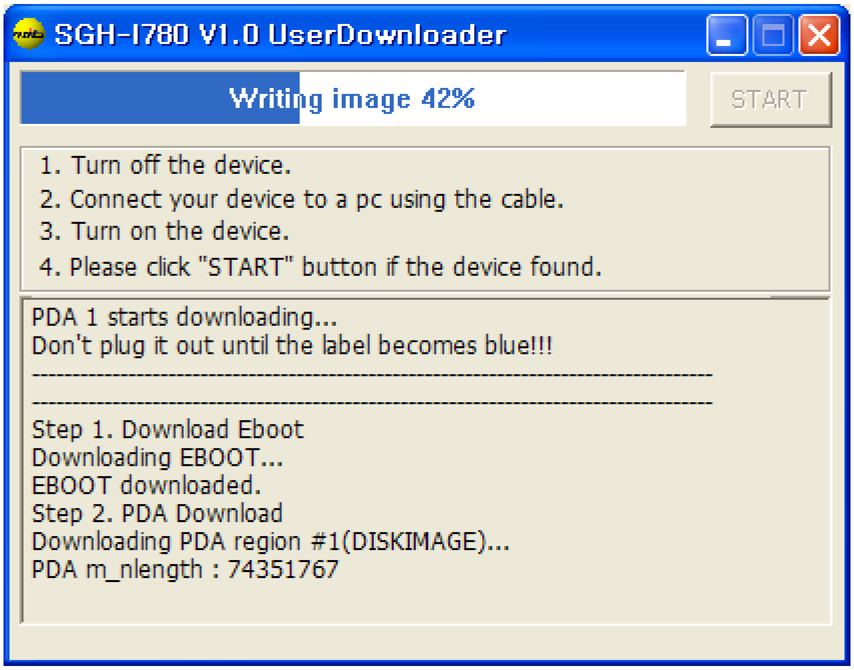
2. Turn off your device.

3. Connect your device to a host computer by using USB DATA Link Cable.

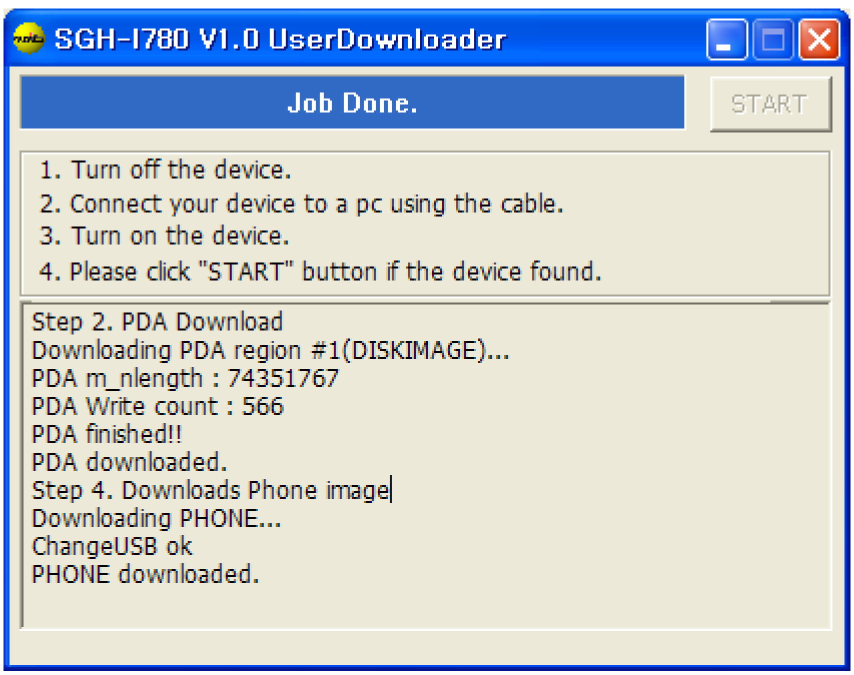
4. Turn on your device and wait.



5. Downloading is started automatically.



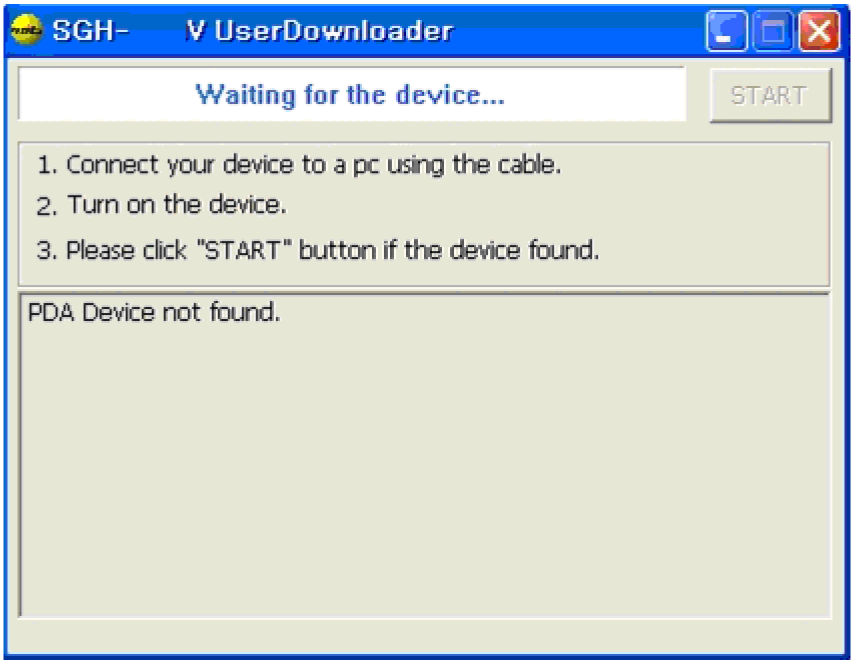
6. When the download is finished, the phone is turned off automatically.



[Job Done]

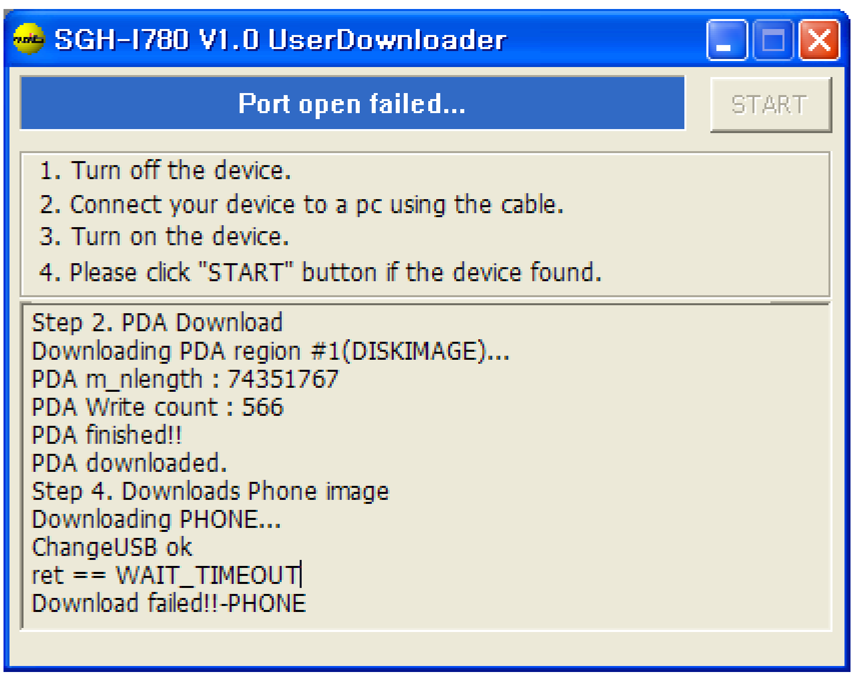
☞ Trouble Shooting

1. “PDA Device not found” message



☞ **Make sure that your device is connected a host computer by USB DATA Link cable.**

2. "Port Open Failed" message or application hang



☞ **After you install "phone USB driver (Samsung CDMA Modem)" at first time, you may see "Port open failed…" message or application hang while downloading a phone image. If so, terminate the application and then try the download again.**

☞ **If USB port is changed, at first time you may see "Port open failed…" message or application hang. If so, terminate the application and then try the download again.**

☞ **If USB cable to the mobile device is not connected tightly, you may see "Port open failed…" message or application hang. If so, terminate the application and then try the download again.**

☞ **If you always see "port open failed" message or application hang,**

1. **When application is activated, go to the device manager, remove the SAMSUNG CDMA Modem and SAMSUNG USB Composite Device.**
2. **Rename C:\WINDOWS\system32\drivers\Modem.sys to other name. (ex. Modem-.sys)**
3. **Go to control panel->program add/remove, and then remove Samsung CDMA Modem driver or Samsung USB driver(MCCI)**
4. **Restart your PC.**
5. **Install attached SAMSUNG CDMA Modem_4.34**
6. **Try the download again.**

3. "Write Failed" message

☞ **If battery level is low, use charged battery and try again.**

4-2-3. Multi download

1. Device Settings

1. USB 2.0 hub:

Use the D-Link DUB-H7, an authorized Hi-Speed USB 2.0 hub, only.

1) Connect the hub to PC.
2) Connect the hub to the adapter.



2. Data Cable: Check the serial number first. The number should start with ‘D.’

1) Connect the hub to the cable.
2) Connect testing devices to the cable



3. Illustration of MultiDownloader Overall Figure after SettingsConfiguration



2. Prerequisite

1. Before beginning the download, make sure all testing devices have the GJ2 or later boot image.
Go to the 'Start à Settings à System à Version' to check that the version is 'PDA: i870BVGJ2' or later.

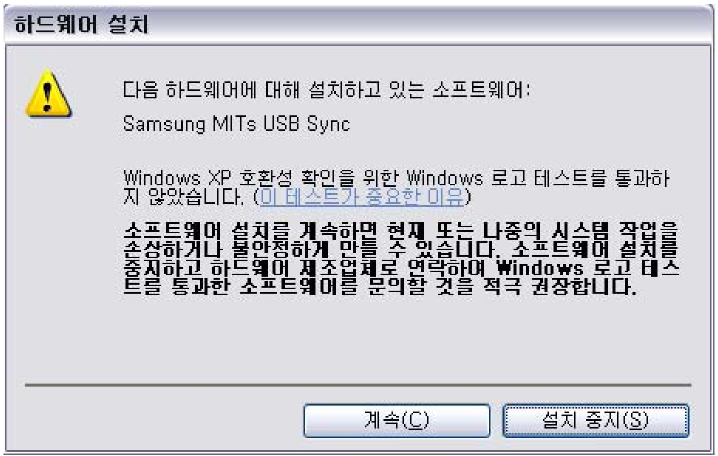
2. Before beginning the download, confirm that the phone modem of the phone is attached to the computer USB port of the computer where the OS image will be downloaded.

To this end, make sure the phone image has been downloaded only once.
(The initial attempt will fail, but this iswill be failed. This is to install the phone modem to the computer USB port will failof the computer.)

Ex) In order to multi-download the OS image for 8 devices, select the phone image only to download download it to 8 devices. Initially, the download to 8 devices will be failed. However, you will see that there are 8 SAMSUNG CDMA modems under "Mthe modem" of in the "Device Manager".
(It may take a while to confirm that the modems appear under the "Mmodem"category. If they appearappeared, they are installed successfully.)

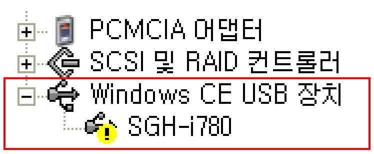
Go to the '3. How to Download' to see the detailedinstruction.
(1) Run the program.
(2) Load the image by selecting the phone image only.
(3) Prepare to detect.
(4) Connect testing devices.

When the below warning message appears,,

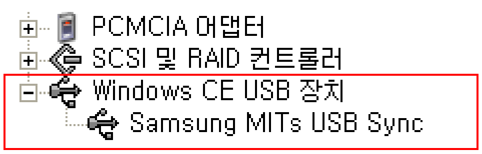


click 'Continue'

and check the Device Manager to see a 'SGH-i780.'



Within 30 seconds, it will change to 'Samsung MITs USB Sync.'



Then, separate the battery and reboot the device to see that the connection has been made.



not connected è

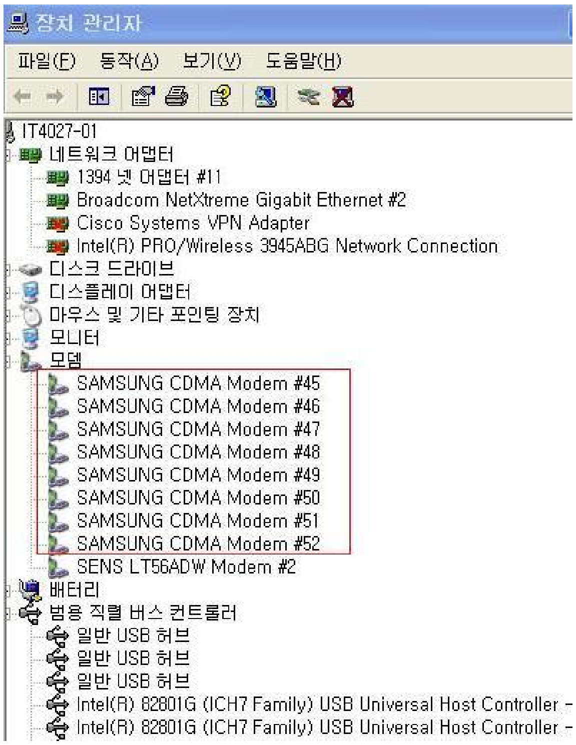


connected

(5) Start downloading

(6) Wait until the phone modems appear in the Device Manager.

Go to the ‘My Computer à–Properties à–Hardware à– Device Manager à– Modem' to check that the SAMSUNG CDMA Modem appears.



(7) After terminating the program, disconnect the device.

(8) Repeat the process from (1)

to confirm that downloading to the phone works appropriately.

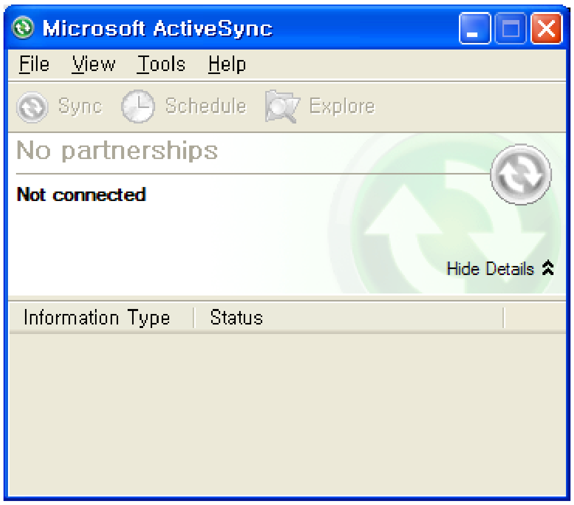
If several phones do not appear,,

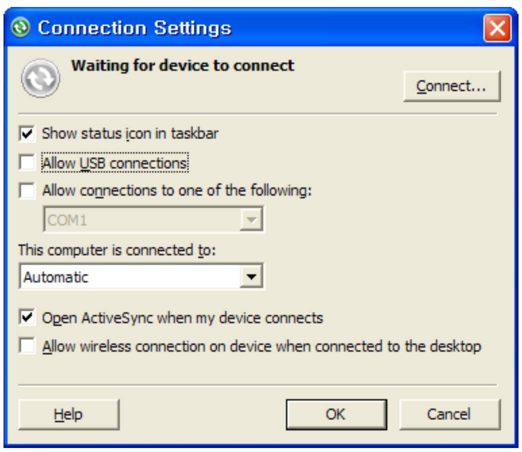
repeat the same process until all devices are connected and appear.

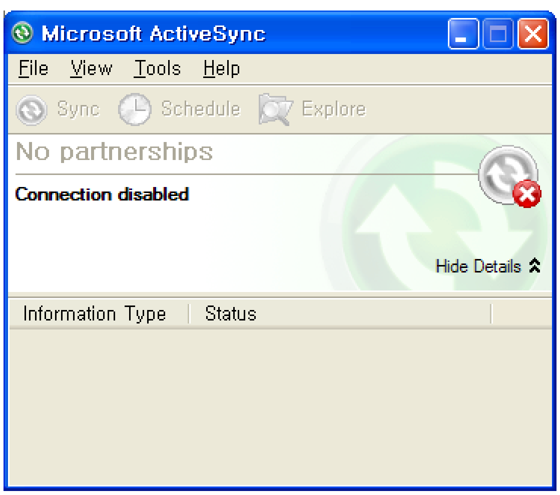
3. How to Download

1. Disconnecting the ActiveSync

Run the ActiveSync. Then, select the Connection Settings under the 'File' tab. Deselect the ' Allow USB Coneection.'



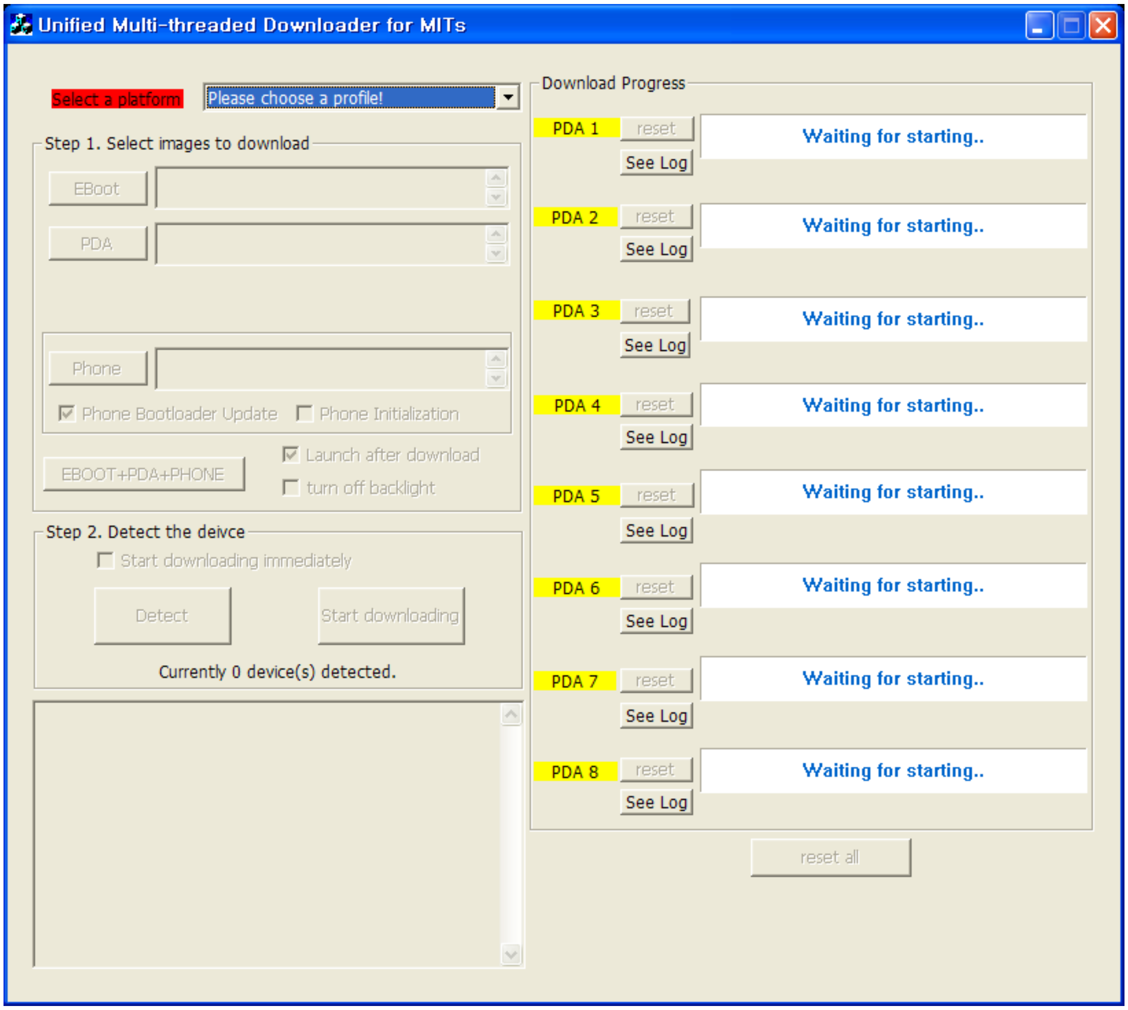




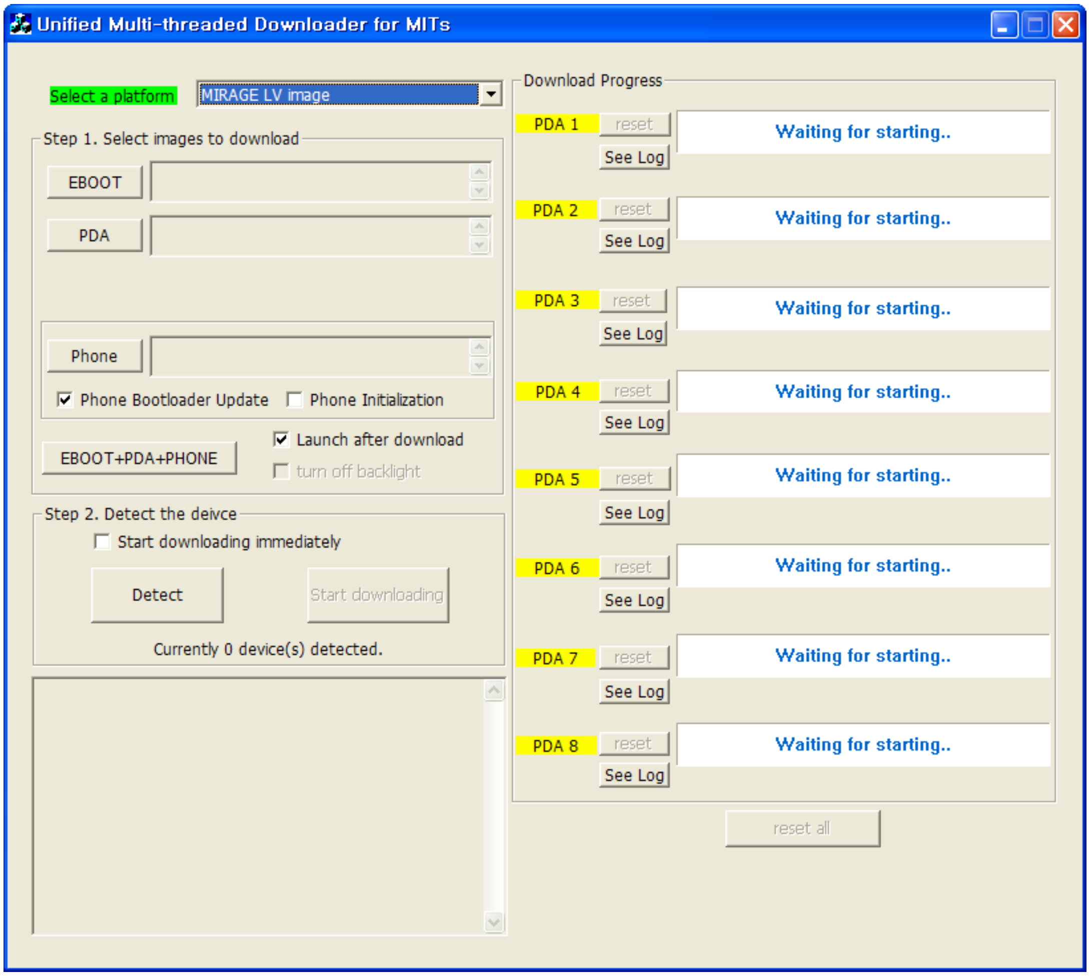
1) Running the program

Run the 'UMDL_i780_v1.0.exe .'

Note, 'Waiting for starting…' in the screenshot sounds very odd. I would suggest that the client consider changing this to 'Waiting to start…'



Buttons will be activated when the 'MIRAGE LV Image' is selected at in the 'Select a platform' menupane.



2) **Loading the Image**

Press Click the 'EBOOT,' 'PDA,' and 'Phone' buttons each to select the appropriate images.

EBOOT - BootImage.nb0

PDA - Flash.bin

Phone - MIRAGE_ORANGE_BVxxx.bin

3) Preparing to start 'Detect'

Click the 'Detect' button on the bottom left side of the menuat the left bottom.

4) Connecting testing devices

Connect testing devices to the cable and turn on the power.

The connection is complete if the 'Device 1 Detected' appears in the box on the bottom left sideat the left bottom and the PDA1 at on the right side turns green.

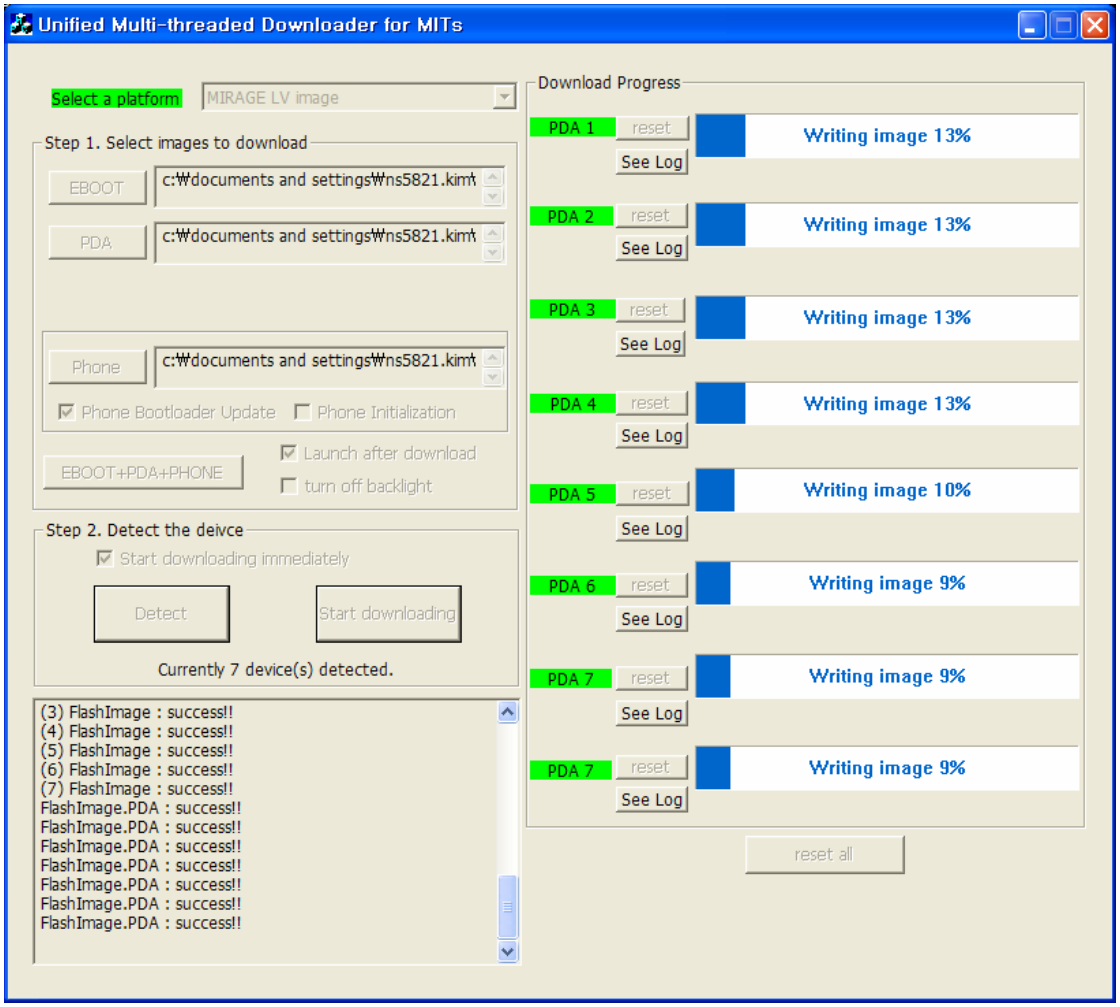
Connect all 8 devices as instructedwritten in theabove.

NOTE: Connect the devices one by one.

Otherwise, an error may occur in the computer USB port of the computer. When this error occurs, go to the page 22 to see the reference.

5) Starting the download

Press Click the 'Start downloading' button.



NOTE1: Make sure the progress, shown in by the bar, is completed for eachin a testing device.

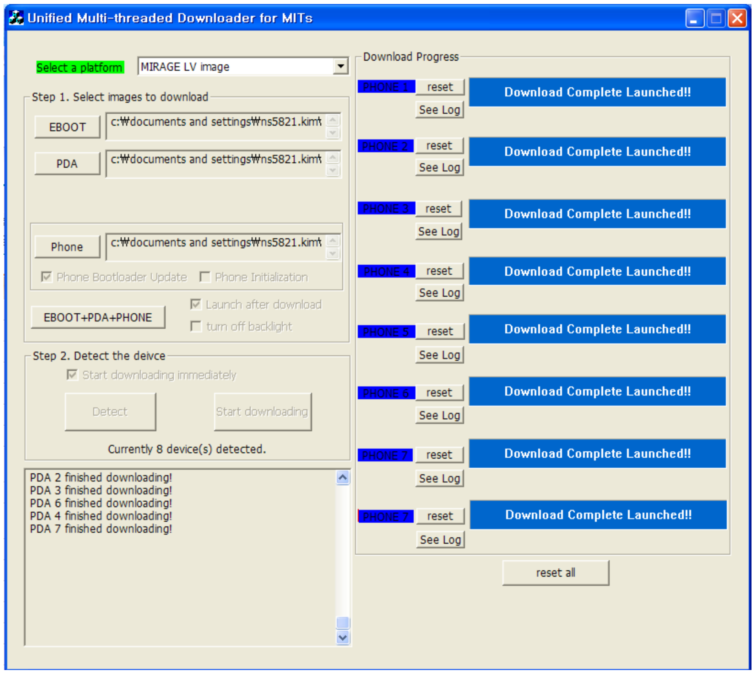
(The progress of downloading the 'Flash.bin,' the PDA image, is shown as the green bar at the bottom of the LCD screen.)



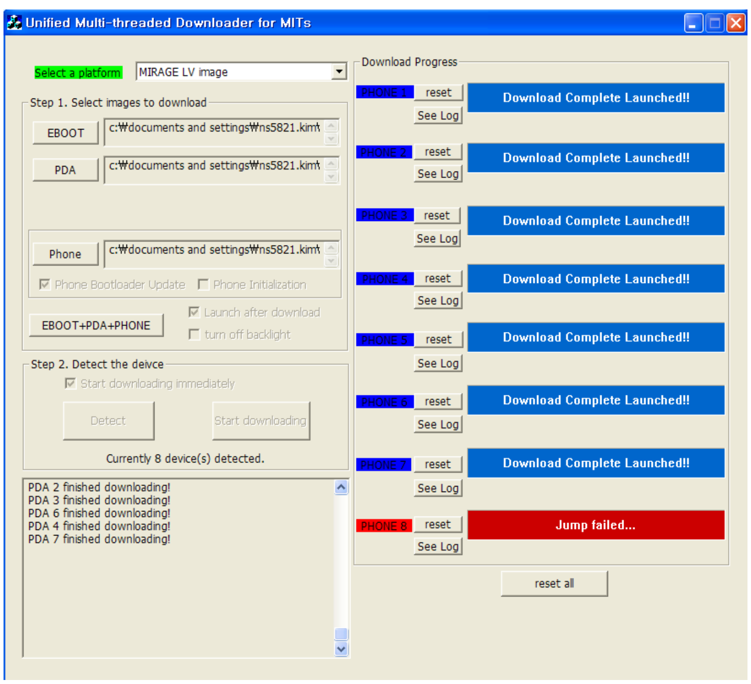
NOTE 2: If the progress bar is in blue, the process will not be completed.
Normally, the progress bar goes to the 'o' button only. (If the version of the image is previous than to GJ4, the error may occur.)

6) Confirming
Reboot testing devices to confirm whether they work properly.

When the download is complete,,



Click the ‘reset all’ button at on the bottom right sidethe right bottomto reset the downloader.



NOTE: If the download failsis failed,,
try once again to downloadsucceed.

- Reference -

How to deal with the an error in the computer USB port of the computer.

Symptom: Device is not identified after connecting it.

Cause: The device is connected before the previous connection is complete. All devices should be connected one by one. Otherwise, an error may occur in the computer USB port of the computer.

Solution:

Proceed with the following action in order only when the previous action does not work.

1) Unplug the USB port from the computer and plug it again.
2) Open the Device Manager and remove the USB hub and install it again.



3) Reboot the computer.

4. Trouble Shooting

1. “PDA Device not found” message

☞ **Make sure that check box, Allow USB connection at the Connection Settings, is released. (ActiveSync)**

2. “Port Open Failed” message or application hang

☞ **After you install “phone USB driver (Samsung CDMA Modem)” at first time, you may see “Port open failed…” message or application hang(Opening COM XX succeed...) while downloading a**

phone image. If so, terminate the application and then try the download again.

☞ **If USB port is changed, at first time you may see “Port open failed…” message or application hang(Opening COM XX succeed...). If so, terminate the application and then try the download again.**

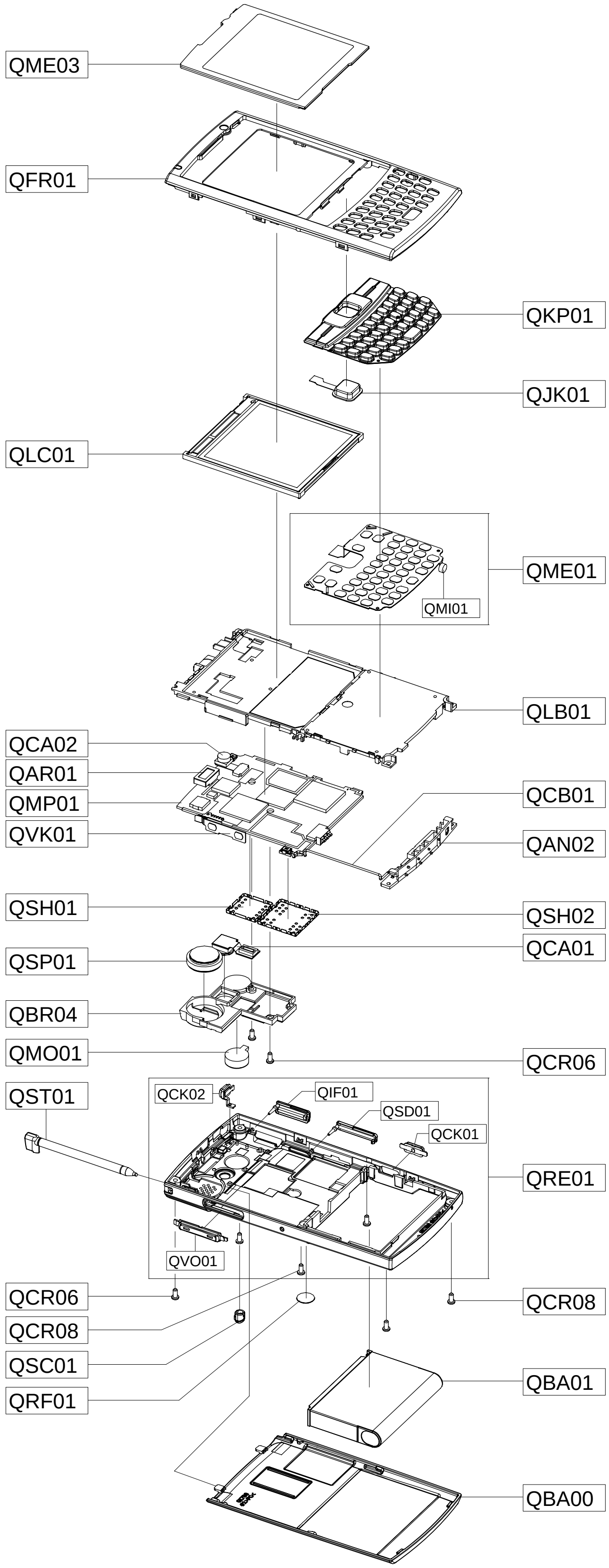
☞ **If USB cable to the mobile device is not connected tightly, you may see “Port open failed…” message or application hang(Opening COM XX succeed...). If so, terminate the application and then try the download again.**

3. “Write Failed” message

☞ **If battery level is low, use charged battery and try again.**

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts List

Design LOC	Description	SEC CODE
QAN02	INTENNA-SGHI780	GH42-01329A
QAR01	AUDIO-RECEIVER	3009-001308
QBA00	ASSY COVER-BATT	GH98-07577A
QBA01	INNER BATTERY PACK-1480MAH,BLK	GH43-02969A
QBR04	ASSY BRACKET-SPEAKER	GH98-06544A
QCA01	CAMERA MODULE	GH59-04823A
QCA02	CAMERA MODULE	GH59-04824A
QCB01	CBF COAXIAL CABLE-SGHI780	GH39-00984A
QCK01	ASSY KEY-CAMERA	GH98-06543A
QCK02	PMO KEY-PWR	GH72-43404A
QCR06	SCREW-MACHINE	6001-001155
QCR06	SCREW-MACHINE	6001-001155
QCR08	SCREW-MACHINE	6001-001611
QCR08	SCREW-MACHINE	6001-001611
QFR01	ASSY CASE-FRONT	GH98-05794A
QIF01	PMO COVER-IF	GH72-43402A
QJK01	UNIT-OPTICAL JOYSTICK	GH59-04912A
QKP01	ASSY KEYPAD-(FTM/BLK)	GH98-07281A
QLB01	ASSY BRACKET-LCD	GH98-06545A
QLC01	LCD-MODULE SGHI780	GH07-01158A
QME01	KEY FPCB-KEY FPCB ASSY	GH59-04910A
QME03	UNIT-TOUCH PANEL(ORA)	GH59-04930A
QMI01	AS-SGHI607 MIC	GH81-06077A
QMO01	MOTOR DC-SGHI780	GH31-00390A
QMP01	PBA MAIN-SGHI780	GH92-04221A
QRE01	ASSY CASE-REAR	GH98-05795A
QRF01	TAPE-RF SHEET	GH74-35960A
QSC01	PMO COVER-SCREW	GH72-45115A
QSD01	PMO COVER-SD	GH72-43401A
QSH01	ICT SHIELD-COVER A	GH70-02883A
QSH02	ICT SHIELD-COVER B	GH70-02884A
QSP01	MICRO SPEAKER	3001-002311
QST01	ASSY ACCE-STYLUS PEN(BLK)	GH98-07299A
QVK01	KEY FPCB-F.P.C(V/K)ASSY	GH59-04905A
QVO01	PMO KEY-VOL	GH72-43403A

Description	SEC CODE
CBF INTERFACE-DLC APCBS10BBE(S	GH39-00922A
ADAPTOR-ATADS10EBE,BLK,EU	GH44-01702A
CHARGER-SGHI780,BTC,BLK	GH44-01842A
S/W CD-SGHI780 COMPANION CD	GH46-00542A
MANUAL USERS-FTM FRENCH QSG	GH68-16462A
MANUAL USERS-FTM FRENCH QRG	GH68-17163A
BAG PE	6902-000634
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(P)-FTM MP3SLIM	GH68-11246B
LABEL(R)-MAIN(FRAN)	GH68-16811C
CUSHION-CASE(EU)	GH69-06128A
BOX-UNIT(ORA)	GH69-06185A
LABEL(R)-PALLET FTM	GH68-16969B
RMO RUBBER-ANT C CLIP	GH73-11105A
SPONGE-SPK BRACKET	GH74-35963A
LABEL(R)-WATER SOAK	GH68-09361A
VINYL-BOHO MAIN LCD	GH74-35170A
VINYL-BOHO MAIN CASE	GH74-35171A
EARPHONE-EARPHONE,BLK,S20P,A T	GH59-05409A

6. Main Electrical Parts List

SEC Code	Design LOC	Description	STATUS
0401-001110	D500	DIODE-SWITCHING	SA
0403-001547	D301	DIODE-ZENER	SA
0406-001167	ZD600	DIODE-TVS	SA
0406-001167	ZD601	DIODE-TVS	SA
0406-001167	ZD602	DIODE-TVS	SA
0406-001167	ZD603	DIODE-TVS	SA
0406-001190	ZD506	DIODE-TVS	SA
0406-001210	ZD403	DIODE-TVS	SA
0406-001210	ZD404	DIODE-TVS	SA
0406-001210	ZD405	DIODE-TVS	SA
0406-001210	ZD406	DIODE-TVS	SA
0406-001210	ZD408	DIODE-TVS	SA
0406-001210	ZD605	DIODE-TVS	SA
0406-001215	ZD300	DIODE-TVS	SA
0406-001215	ZD301	DIODE-TVS	SA
0406-001215	ZD407	DIODE-TVS	SA
0406-001231	D401	DIODE-TVS	SA
0406-001231	D402	DIODE-TVS	SA
0406-001231	D600	DIODE-TVS	SA
0406-001231	D601	DIODE-TVS	SA
0406-001231	D604	DIODE-TVS	SA
0406-001231	D605	DIODE-TVS	SA
0406-001231	D606	DIODE-TVS	SA
0406-001231	ZD400	DIODE-TVS	SA
0406-001231	ZD401	DIODE-TVS	SA
0406-001231	ZD501	DIODE-TVS	SA
0406-001231	ZD502	DIODE-TVS	SA
0406-001231	ZD503	DIODE-TVS	SA
0406-001231	ZD504	DIODE-TVS	SA
0406-001231	ZD505	DIODE-TVS	SA
0407-000115	D400	DIODE-ARRAY	SA
0407-001002	D300	DIODE-ARRAY	SA
0407-001007	D302	DIODE-ARRAY	SA
0501-000225	TR600	TR-SMALL SIGNAL	SA
0501-000225	TR601	TR-SMALL SIGNAL	SA
0501-000225	TR602	TR-SMALL SIGNAL	SA
0504-000168	Q300	TR-DIGITAL	SA
0504-000168	Q301	TR-DIGITAL	SA
0504-000168	Q303	TR-DIGITAL	SA
0505-001165	Q302	FET-SILICON	SA
0601-001905	LED600	LED	SA
0801-002237	U202	IC-CMOS LOGIC	SA
0801-002529	U203	IC-CMOS LOGIC	SA
0801-002800	U205	IC-CMOS LOGIC	SA
0801-002800	U303	IC-CMOS LOGIC	SA
0801-002800	U307	IC-CMOS LOGIC	SA
0801-002800	U500	IC-CMOS LOGIC	SA
0801-002800	U518	IC-CMOS LOGIC	SA
0801-002882	U305	IC-CMOS LOGIC	SA
0801-003013	U200	IC-CMOS LOGIC	SA
0801-003013	U601	IC-CMOS LOGIC	SA
0801-003013	U602	IC-CMOS LOGIC	SA
0801-003052	U204	IC-CMOS LOGIC	SA

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0801-003052	U508	IC-CMOS LOGIC	SA
0801-003076	U201	IC-CMOS LOGIC	SA
0902-002235	UCP700	IC-MICROPROCESSOR	SA
0909-001056	U503	IC-REAL TIME CLOCK	SA
1001-001336	U502	IC-ANALOG SWITCH	SA
1001-001362	U402	IC-ANALOG SWITCH	SA
1001-001362	U403	IC-ANALOG SWITCH	SA
1001-001401	U501	IC-ANALOG SWITCH	SA
1002-001410	U406	IC-D/A CONVERTER	SA
1006-001322	U600	IC-LINE TRANSCEIVER	SA
1106-001564	UME201	IC-SRAM	SA
1108-000127	UME200	IC-MCP	SA
1201-002446	PAM100	IC-POWER AMP	SA
1201-002531	PAM101	IC-POWER AMP	SA
1201-002587	U400	IC-AUDIO AMP	SA
1203-002785	U507	IC-VOL. DETECTOR	SA
1203-002832	U308	IC-VOL. DETECTOR	SA
1203-003328	U514	IC-DC/DC CONVERTER	SA
1203-003531	U506	IC-POSI.FIXED REG.	SA
1203-003643	U511	IC-MULTI REG.	SA
1203-003664	U512	IC-MULTI REG.	SA
1203-003664	U515	IC-MULTI REG.	SA
1203-003664	U516	IC-MULTI REG.	SA
1203-003748	U510	IC-MULTI REG.	SA
1203-003926	U306	IC-VOL. DETECTOR	SA
1203-004395	U517	IC-POSI.FIXED REG.	SA
1203-004435	U509	IC-MULTI REG.	SA
1203-004435	U513	IC-MULTI REG.	SA
1203-004606	U505	IC-MULTI REG.	SA
1203-004763	U519	IC-VOL. DETECTOR	SA
1203-004838	U301	IC-BATTERY	SA
1203-004841	U309	IC-POWER SUPERVISOR	SA
1203-004926	U302	IC-POWER SUPERVISOR	SA
1205-002720	UCD400	IC-CODEC	SA
1205-002767	U300	IC-SWITCH	SA
1205-003215	UCP200	IC-MODEM	SA
1205-003285	U100	IC-TRANSCEIVER	SA
1205-003286	U101	IC-RECEIVER	SA
1205-003316	U504	IC-INTERFACE	SA
1404-001221	VR400	THERMISTOR-NTC	SA
2007-000070	R300	R-CHIP	SA
2007-000138	R115	R-CHIP	SA
2007-000138	R132	R-CHIP	SA
2007-000138	R136	R-CHIP	SA
2007-000138	R141	R-CHIP	SA
2007-000140	R520	R-CHIP	SA
2007-000141	R113	R-CHIP	SA
2007-000141	R206	R-CHIP	SA
2007-000148	R703	R-CHIP	SA
2007-000148	R706	R-CHIP	SA
2007-000148	R712	R-CHIP	SA
2007-000157	R302	R-CHIP	SA
2007-000162	R139	R-CHIP	SA

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2007-000162	R140	R-CHIP	SA
2007-000162	R142	R-CHIP	SA
2007-000162	R146	R-CHIP	SA
2007-000162	R149	R-CHIP	SA
2007-000162	R303	R-CHIP	SA
2007-000162	R304	R-CHIP	SA
2007-000162	R320	R-CHIP	SA
2007-000162	R328	R-CHIP	SA
2007-000162	R512	R-CHIP	SA
2007-000162	R704	R-CHIP	SA
2007-000165	R312	R-CHIP	SA
2007-000168	R212	R-CHIP	SA
2007-000170	R329	R-CHIP	SA
2007-000170	R501	R-CHIP	SA
2007-000170	R607	R-CHIP	SA
2007-000171	R103	R-CHIP	SA
2007-000171	R105	R-CHIP	SA
2007-000171	R109	R-CHIP	SA
2007-000171	R121	R-CHIP	SA
2007-000171	R125	R-CHIP	SA
2007-000171	R127	R-CHIP	SA
2007-000171	R131	R-CHIP	SA
2007-000171	R135	R-CHIP	SA
2007-000171	R150	R-CHIP	SA
2007-000171	R151	R-CHIP	SA
2007-000171	R330	R-CHIP	SA
2007-000171	R403	R-CHIP	SA
2007-000171	R404	R-CHIP	SA
2007-000171	R410	R-CHIP	SA
2007-000171	R513	R-CHIP	SA
2007-000171	R702	R-CHIP	SA
2007-000171	R705	R-CHIP	SA
2007-000171	R707	R-CHIP	SA
2007-000172	R100	R-CHIP	SA
2007-000172	R122	R-CHIP	SA
2007-000174	R106	R-CHIP	SA
2007-001284	R123	R-CHIP	SA
2007-001290	R208	R-CHIP	SA
2007-001298	R116	R-CHIP	SA
2007-001298	R130	R-CHIP	SA
2007-001298	R305	R-CHIP	SA
2007-001298	R306	R-CHIP	SA
2007-001305	R107	R-CHIP	SA
2007-001305	R108	R-CHIP	SA
2007-001305	R117	R-CHIP	SA
2007-001305	R118	R-CHIP	SA
2007-001308	R124	R-CHIP	SA
2007-001319	R709	R-CHIP	SA
2007-001319	R710	R-CHIP	SA
2007-003010	R506	R-CHIP	SA
2007-003010	R510	R-CHIP	SA
2007-003010	R511	R-CHIP	SA
2007-003015	R102	R-CHIP	SA

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2007-003015	R110	R-CHIP	SA
2007-007009	R133	R-CHIP	SA
2007-007014	R313	R-CHIP	SA
2007-007014	R314	R-CHIP	SA
2007-007107	R210	R-CHIP	SA
2007-007107	R211	R-CHIP	SA
2007-007107	R401	R-CHIP	SA
2007-007107	R402	R-CHIP	SA
2007-007107	R412	R-CHIP	SA
2007-007107	R516	R-CHIP	SA
2007-007107	R517	R-CHIP	SA
2007-007107	R518	R-CHIP	SA
2007-007132	R319	R-CHIP	SA
2007-007132	R503	R-CHIP	SA
2007-007137	R317	R-CHIP	SA
2007-007137	R318	R-CHIP	SA
2007-007142	R143	R-CHIP	SA
2007-007142	R144	R-CHIP	SA
2007-007142	R200	R-CHIP	SA
2007-007142	R203	R-CHIP	SA
2007-007142	R204	R-CHIP	SA
2007-007142	R205	R-CHIP	SA
2007-007142	R301	R-CHIP	SA
2007-007142	R323	R-CHIP	SA
2007-007142	R500	R-CHIP	SA
2007-007142	R519	R-CHIP	SA
2007-007142	R602	R-CHIP	SA
2007-007142	R603	R-CHIP	SA
2007-007148	R332	R-CHIP	SA
2007-007155	R413	R-CHIP	SNA
2007-007155	R420	R-CHIP	SNA
2007-007193	R101	R-CHIP	SA
2007-007193	R111	R-CHIP	SA
2007-007306	R213	R-CHIP	SA
2007-007309	R104	R-CHIP	SA
2007-007314	R126	R-CHIP	SA
2007-007316	R207	R-CHIP	SA
2007-007316	R307	R-CHIP	SA
2007-007316	R309	R-CHIP	SA
2007-007317	R507	R-CHIP	SA
2007-007317	R509	R-CHIP	SA
2007-007318	R315	R-CHIP	SA
2007-007318	R515	R-CHIP	SA
2007-007318	R600	R-CHIP	SA
2007-007318	R605	R-CHIP	SA
2007-007318	R608	R-CHIP	SA
2007-007405	R308	R-CHIP	SA
2007-007468	R310	R-CHIP	SA
2007-007468	R409	R-CHIP	SA
2007-007491	R120	R-CHIP	SA
2007-007528	R414	R-CHIP	SA
2007-007528	R419	R-CHIP	SA
2007-007589	R326	R-CHIP	SA

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2007-007698	R502	R-CHIP	SA
2007-007766	R119	R-CHIP	SA
2007-007798	R514	R-CHIP	SA
2007-007798	R604	R-CHIP	SA
2007-007798	R606	R-CHIP	SA
2007-007942	R209	R-CHIP	SA
2007-007942	R327	R-CHIP	SA
2007-007981	R708	R-CHIP	SA
2007-007981	R711	R-CHIP	SA
2007-008015	R601	R-CHIP	SA
2007-008456	R508	R-CHIP	SA
2007-008531	R114	R-CHIP	SA
2007-008544	R112	R-CHIP	SA
2007-008672	R411	R-CHIP	SA
2007-008708	R701	R-CHIP	SA
2007-008739	R321	R-CHIP	SA
2007-008739	R322	R-CHIP	SA
2007-008739	R324	R-CHIP	SA
2007-008739	R325	R-CHIP	SA
2007-008806	R134	R-CHIP	SA
2203-000233	C110	C-CER,CHIP	SA
2203-000233	C157	C-CER,CHIP	SA
2203-000233	C158	C-CER,CHIP	SA
2203-000233	C164	C-CER,CHIP	SA
2203-000233	C166	C-CER,CHIP	SA
2203-000233	C167	C-CER,CHIP	SA
2203-000233	C169	C-CER,CHIP	SA
2203-000233	C170	C-CER,CHIP	SA
2203-000233	C178	C-CER,CHIP	SA
2203-000233	C181	C-CER,CHIP	SA
2203-000233	C182	C-CER,CHIP	SA
2203-000233	C503	C-CER,CHIP	SA
2203-000254	C1004	C-CER,CHIP	SA
2203-000254	C149	C-CER,CHIP	SA
2203-000254	C156	C-CER,CHIP	SA
2203-000254	C193	C-CER,CHIP	SA
2203-000254	C204	C-CER,CHIP	SA
2203-000254	C207	C-CER,CHIP	SA
2203-000254	C214	C-CER,CHIP	SA
2203-000254	C215	C-CER,CHIP	SA
2203-000254	C225	C-CER,CHIP	SA
2203-000254	C229	C-CER,CHIP	SA
2203-000254	C232	C-CER,CHIP	SA
2203-000254	C238	C-CER,CHIP	SA
2203-000254	C242	C-CER,CHIP	SA
2203-000254	C704	C-CER,CHIP	SA
2203-000254	C710	C-CER,CHIP	SA
2203-000254	C714	C-CER,CHIP	SA
2203-000254	C719	C-CER,CHIP	SA
2203-000254	C736	C-CER,CHIP	SA
2203-000311	C611	C-CER,CHIP	SA
2203-000311	C612	C-CER,CHIP	SA
2203-000311	C614	C-CER,CHIP	SA

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2203-000330	C303	C-CER,CHIP	SA
2203-000330	C304	C-CER,CHIP	SA
2203-000330	C432	C-CER,CHIP	SA
2203-000330	C601	C-CER,CHIP	SA
2203-000330	C604	C-CER,CHIP	SA
2203-000330	C742	C-CER,CHIP	SA
2203-000330	C743	C-CER,CHIP	SA
2203-000386	C428	C-CER,CHIP	SA
2203-000386	C434	C-CER,CHIP	SA
2203-000386	C508	C-CER,CHIP	SA
2203-000386	C509	C-CER,CHIP	SA
2203-000438	C1007	C-CER,CHIP	SA
2203-000438	C101	C-CER,CHIP	SA
2203-000438	C120	C-CER,CHIP	SA
2203-000438	C147	C-CER,CHIP	SA
2203-000438	C152	C-CER,CHIP	SA
2203-000438	C206	C-CER,CHIP	SA
2203-000438	C705	C-CER,CHIP	SA
2203-000438	C711	C-CER,CHIP	SA
2203-000489	C200	C-CER,CHIP	SA
2203-000489	C407	C-CER,CHIP	SA
2203-000489	C408	C-CER,CHIP	SA
2203-000627	C100	C-CER,CHIP	SNA
2203-000627	C153	C-CER,CHIP	SNA
2203-000627	C159	C-CER,CHIP	SNA
2203-000627	C188	C-CER,CHIP	SNA
2203-000679	C618	C-CER,CHIP	SA
2203-000679	C619	C-CER,CHIP	SA
2203-000679	C620	C-CER,CHIP	SA
2203-000679	C621	C-CER,CHIP	SA
2203-000679	C622	C-CER,CHIP	SA
2203-000679	C623	C-CER,CHIP	SA
2203-000679	C624	C-CER,CHIP	SA
2203-000679	C625	C-CER,CHIP	SA
2203-000714	C123	C-CER,CHIP	SA
2203-000812	C1006	C-CER,CHIP	SA
2203-000812	C103	C-CER,CHIP	SA
2203-000812	C116	C-CER,CHIP	SA
2203-000812	C126	C-CER,CHIP	SA
2203-000812	C127	C-CER,CHIP	SA
2203-000812	C162	C-CER,CHIP	SA
2203-000812	C171	C-CER,CHIP	SA
2203-000812	C180	C-CER,CHIP	SA
2203-000812	C183	C-CER,CHIP	SA
2203-000812	C344	C-CER,CHIP	SA
2203-000812	C346	C-CER,CHIP	SA
2203-000812	C400	C-CER,CHIP	SA
2203-000812	C403	C-CER,CHIP	SA
2203-000812	C405	C-CER,CHIP	SA
2203-000812	C416	C-CER,CHIP	SA
2203-000812	C422	C-CER,CHIP	SA
2203-000812	C505	C-CER,CHIP	SA
2203-000812	C506	C-CER,CHIP	SA

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2203-000812	C512	C-CER,CHIP	SA
2203-000812	C514	C-CER,CHIP	SA
2203-000812	C516	C-CER,CHIP	SA
2203-000812	C518	C-CER,CHIP	SA
2203-000812	C600	C-CER,CHIP	SA
2203-000812	C602	C-CER,CHIP	SA
2203-000812	C605	C-CER,CHIP	SA
2203-000812	U405	C-CER,CHIP	SA
2203-000854	C148	C-CER,CHIP	SA
2203-000870	C137	C-CER,CHIP	SA
2203-000870	C142	C-CER,CHIP	SA
2203-000940	C154	C-CER,CHIP	SA
2203-000995	C119	C-CER,CHIP	SA
2203-000995	C125	C-CER,CHIP	SA
2203-000995	C136	C-CER,CHIP	SA
2203-001072	C138	C-CER,CHIP	SA
2203-001153	C424	C-CER,CHIP	SA
2203-001259	C401	C-CER,CHIP	SA
2203-001259	C406	C-CER,CHIP	SA
2203-001259	C415	C-CER,CHIP	SA
2203-001259	C421	C-CER,CHIP	SA
2203-001437	C114	C-CER,CHIP	SA
2203-002668	C118	C-CER,CHIP	SA
2203-002668	C124	C-CER,CHIP	SA
2203-002668	C174	C-CER,CHIP	SA
2203-002668	C190	C-CER,CHIP	SA
2203-002677	C139	C-CER,CHIP	SA
2203-002709	C1001	C-CER,CHIP	SA
2203-002709	C191	C-CER,CHIP	SA
2203-002709	C194	C-CER,CHIP	SA
2203-002709	C196	C-CER,CHIP	SA
2203-002709	C198	C-CER,CHIP	SA
2203-002709	C199	C-CER,CHIP	SA
2203-002709	C201	C-CER,CHIP	SA
2203-002709	C211	C-CER,CHIP	SA
2203-002709	C212	C-CER,CHIP	SA
2203-002709	C223	C-CER,CHIP	SA
2203-002709	C224	C-CER,CHIP	SA
2203-002709	C302	C-CER,CHIP	SA
2203-002709	C309	C-CER,CHIP	SA
2203-002709	C311	C-CER,CHIP	SA
2203-002709	C313	C-CER,CHIP	SA
2203-002709	C315	C-CER,CHIP	SA
2203-002709	C320	C-CER,CHIP	SA
2203-002709	C324	C-CER,CHIP	SA
2203-002709	C325	C-CER,CHIP	SA
2203-002709	C326	C-CER,CHIP	SA
2203-002709	C327	C-CER,CHIP	SA
2203-002709	C328	C-CER,CHIP	SA
2203-002709	C329	C-CER,CHIP	SA
2203-002709	C330	C-CER,CHIP	SA
2203-002709	C336	C-CER,CHIP	SA
2203-002709	C339	C-CER,CHIP	SA

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2203-002709	C342	C-CER,CHIP	SA
2203-002709	C343	C-CER,CHIP	SA
2203-002709	C409	C-CER,CHIP	SA
2203-002709	C412	C-CER,CHIP	SA
2203-002709	C435	C-CER,CHIP	SA
2203-002709	C501	C-CER,CHIP	SA
2203-002709	C533	C-CER,CHIP	SA
2203-002709	C561	C-CER,CHIP	SA
2203-002709	C613	C-CER,CHIP	SA
2203-002709	C615	C-CER,CHIP	SA
2203-002709	C616	C-CER,CHIP	SA
2203-002709	C617	C-CER,CHIP	SA
2203-002709	C703	C-CER,CHIP	SA
2203-002709	C708	C-CER,CHIP	SA
2203-002709	C709	C-CER,CHIP	SA
2203-002709	C713	C-CER,CHIP	SA
2203-002709	C718	C-CER,CHIP	SA
2203-002709	C734	C-CER,CHIP	SA
2203-002709	C735	C-CER,CHIP	SA
2203-002709	C737	C-CER,CHIP	SA
2203-002709	C738	C-CER,CHIP	SA
2203-002759	C155	C-CER,CHIP	SA
2203-002968	C173	C-CER,CHIP	SA
2203-003054	C510	C-CER,CHIP	SA
2203-003054	C511	C-CER,CHIP	SA
2203-003054	C513	C-CER,CHIP	SA
2203-003054	C515	C-CER,CHIP	SA
2203-003054	C517	C-CER,CHIP	SA
2203-003054	C520	C-CER,CHIP	SA
2203-003054	C603	C-CER,CHIP	SA
2203-005281	C186	C-CER,CHIP	SA
2203-005288	C109	C-CER,CHIP	SA
2203-005382	C112	C-CER,CHIP	SA
2203-005382	C113	C-CER,CHIP	SA
2203-005393	C184	C-CER,CHIP	SA
2203-005481	C210	C-CER,CHIP	SA
2203-005482	C189	C-CER,CHIP	SA
2203-005482	C197	C-CER,CHIP	SA
2203-005482	C213	C-CER,CHIP	SA
2203-005482	C248	C-CER,CHIP	SA
2203-005482	C426	C-CER,CHIP	SA
2203-005659	C104	C-CER,CHIP	SA
2203-005659	C105	C-CER,CHIP	SA
2203-005659	C106	C-CER,CHIP	SA
2203-005659	C107	C-CER,CHIP	SA
2203-005725	C133	C-CER,CHIP	SA
2203-005725	C135	C-CER,CHIP	SA
2203-005725	C150	C-CER,CHIP	SA
2203-005727	C111	C-CER,CHIP	SA
2203-005736	C134	C-CER,CHIP	SA
2203-005736	C151	C-CER,CHIP	SA
2203-005806	C1002	C-CER,CHIP	SNA
2203-005806	C1005	C-CER,CHIP	SNA

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2203-006048	C102	C-CER,CHIP	SA
2203-006048	C160	C-CER,CHIP	SA
2203-006048	C161	C-CER,CHIP	SA
2203-006048	C165	C-CER,CHIP	SA
2203-006048	C179	C-CER,CHIP	SA
2203-006048	C208	C-CER,CHIP	SA
2203-006048	C216	C-CER,CHIP	SA
2203-006048	C217	C-CER,CHIP	SA
2203-006048	C226	C-CER,CHIP	SA
2203-006048	C230	C-CER,CHIP	SA
2203-006048	C231	C-CER,CHIP	SA
2203-006048	C233	C-CER,CHIP	SA
2203-006048	C234	C-CER,CHIP	SA
2203-006048	C239	C-CER,CHIP	SA
2203-006048	C240	C-CER,CHIP	SA
2203-006048	C243	C-CER,CHIP	SA
2203-006048	C246	C-CER,CHIP	SA
2203-006048	C247	C-CER,CHIP	SA
2203-006048	C249	C-CER,CHIP	SA
2203-006048	C250	C-CER,CHIP	SA
2203-006048	C429	C-CER,CHIP	SA
2203-006048	C433	C-CER,CHIP	SA
2203-006048	C558	C-CER,CHIP	SA
2203-006048	C563	C-CER,CHIP	SA
2203-006048	C564	C-CER,CHIP	SA
2203-006165	C560	C-CER,CHIP	SA
2203-006208	C306	C-CER,CHIP	SA
2203-006208	C310	C-CER,CHIP	SA
2203-006208	C314	C-CER,CHIP	SA
2203-006208	C316	C-CER,CHIP	SA
2203-006208	C402	C-CER,CHIP	SA
2203-006208	C413	C-CER,CHIP	SA
2203-006208	C423	C-CER,CHIP	SA
2203-006208	C529	C-CER,CHIP	SA
2203-006260	C345	C-CER,CHIP	SA
2203-006307	C504	C-CER,CHIP	SA
2203-006324	C192	C-CER,CHIP	SA
2203-006324	C300	C-CER,CHIP	SA
2203-006324	C553	C-CER,CHIP	SA
2203-006348	C565	C-CER,CHIP	SA
2203-006399	C163	C-CER,CHIP	SA
2203-006399	C507	C-CER,CHIP	SA
2203-006399	C524	C-CER,CHIP	SA
2203-006399	C557	C-CER,CHIP	SA
2203-006423	C121	C-CER,CHIP	SA
2203-006423	C122	C-CER,CHIP	SA
2203-006423	C131	C-CER,CHIP	SA
2203-006423	C132	C-CER,CHIP	SA
2203-006423	C143	C-CER,CHIP	SA
2203-006423	C144	C-CER,CHIP	SA
2203-006423	C145	C-CER,CHIP	SA
2203-006423	C146	C-CER,CHIP	SA
2203-006423	C209	C-CER,CHIP	SA

SEC Code	Design LOC	Description	STATUS
2203-006562	C1000	C-CER,CHIP	SA
2203-006562	C130	C-CER,CHIP	SA
2203-006562	C195	C-CER,CHIP	SA
2203-006562	C202	C-CER,CHIP	SA
2203-006562	C203	C-CER,CHIP	SA
2203-006562	C205	C-CER,CHIP	SA
2203-006562	C218	C-CER,CHIP	SA
2203-006562	C221	C-CER,CHIP	SA
2203-006562	C222	C-CER,CHIP	SA
2203-006562	C227	C-CER,CHIP	SA
2203-006562	C228	C-CER,CHIP	SA
2203-006562	C235	C-CER,CHIP	SA
2203-006562	C236	C-CER,CHIP	SA
2203-006562	C237	C-CER,CHIP	SA
2203-006562	C244	C-CER,CHIP	SA
2203-006562	C245	C-CER,CHIP	SA
2203-006562	C307	C-CER,CHIP	SA
2203-006562	C317	C-CER,CHIP	SA
2203-006562	C318	C-CER,CHIP	SA
2203-006562	C319	C-CER,CHIP	SA
2203-006562	C404	C-CER,CHIP	SA
2203-006562	C419	C-CER,CHIP	SA
2203-006562	C420	C-CER,CHIP	SA
2203-006562	C430	C-CER,CHIP	SA
2203-006562	C431	C-CER,CHIP	SA
2203-006562	C436	C-CER,CHIP	SA
2203-006562	C521	C-CER,CHIP	SA
2203-006562	C527	C-CER,CHIP	SA
2203-006562	C534	C-CER,CHIP	SA
2203-006562	C537	C-CER,CHIP	SA
2203-006562	C540	C-CER,CHIP	SA
2203-006562	C548	C-CER,CHIP	SA
2203-006562	C549	C-CER,CHIP	SA
2203-006562	C550	C-CER,CHIP	SA
2203-006562	C554	C-CER,CHIP	SA
2203-006562	C607	C-CER,CHIP	SA
2203-006562	C609	C-CER,CHIP	SA
2203-006562	C702	C-CER,CHIP	SA
2203-006562	C706	C-CER,CHIP	SA
2203-006562	C707	C-CER,CHIP	SA
2203-006562	C712	C-CER,CHIP	SA
2203-006562	C715	C-CER,CHIP	SA
2203-006562	C717	C-CER,CHIP	SA
2203-006562	C722	C-CER,CHIP	SA
2203-006562	C723	C-CER,CHIP	SA
2203-006562	C724	C-CER,CHIP	SA
2203-006562	C725	C-CER,CHIP	SA
2203-006562	C726	C-CER,CHIP	SA
2203-006562	C727	C-CER,CHIP	SA
2203-006562	C728	C-CER,CHIP	SA
2203-006562	C729	C-CER,CHIP	SA
2203-006562	C730	C-CER,CHIP	SA
2203-006562	C731	C-CER,CHIP	SA

SEC Code	Design LOC	Description	STATUS
2203-006562	C732	C-CER,CHIP	SA
2203-006562	C733	C-CER,CHIP	SA
2203-006681	C1008	C-CER,CHIP	SA
2203-006681	C115	C-CER,CHIP	SA
2203-006681	C176	C-CER,CHIP	SA
2203-006681	C500	C-CER,CHIP	SA
2203-006681	C502	C-CER,CHIP	SA
2203-006681	C519	C-CER,CHIP	SA
2203-006681	C528	C-CER,CHIP	SA
2203-006681	C531	C-CER,CHIP	SA
2203-006681	C716	C-CER,CHIP	SA
2203-006681	C720	C-CER,CHIP	SA
2203-006681	C721	C-CER,CHIP	SA
2203-006824	C117	C-CER,CHIP	SA
2203-006824	C220	C-CER,CHIP	SA
2203-006824	C301	C-CER,CHIP	SA
2203-006824	C321	C-CER,CHIP	SA
2203-006824	C322	C-CER,CHIP	SA
2203-006824	C323	C-CER,CHIP	SA
2203-006824	C331	C-CER,CHIP	SA
2203-006824	C332	C-CER,CHIP	SA
2203-006824	C333	C-CER,CHIP	SA
2203-006824	C337	C-CER,CHIP	SA
2203-006824	C338	C-CER,CHIP	SA
2203-006824	C340	C-CER,CHIP	SA
2203-006824	C347	C-CER,CHIP	SA
2203-006824	C522	C-CER,CHIP	SA
2203-006824	C523	C-CER,CHIP	SA
2203-006824	C525	C-CER,CHIP	SA
2203-006824	C535	C-CER,CHIP	SA
2203-006824	C536	C-CER,CHIP	SA
2203-006824	C538	C-CER,CHIP	SA
2203-006824	C539	C-CER,CHIP	SA
2203-006824	C541	C-CER,CHIP	SA
2203-006824	C542	C-CER,CHIP	SA
2203-006824	C543	C-CER,CHIP	SA
2203-006824	C544	C-CER,CHIP	SA
2203-006824	C545	C-CER,CHIP	SA
2203-006824	C546	C-CER,CHIP	SA
2203-006824	C547	C-CER,CHIP	SA
2203-006824	C551	C-CER,CHIP	SA
2203-006824	C552	C-CER,CHIP	SA
2203-006824	C555	C-CER,CHIP	SA
2203-006824	C556	C-CER,CHIP	SA
2203-006824	C559	C-CER,CHIP	SA
2203-006825	C334	C-CER,CHIP	SA
2203-006825	C335	C-CER,CHIP	SA
2203-006825	C341	C-CER,CHIP	SA
2203-006825	C348	C-CER,CHIP	SA
2203-006837	C172	C-CER,CHIP	SA
2203-006838	C312	C-CER,CHIP	SA
2203-006838	C414	C-CER,CHIP	SA
2203-006838	C425	C-CER,CHIP	SA

SEC Code	Design LOC	Description	STATUS
2203-006838	C530	C-CER,CHIP	SA
2203-006838	C608	C-CER,CHIP	SA
2203-006838	C610	C-CER,CHIP	SA
2203-006872	C219	C-CER,CHIP	SA
2203-006890	C241	C-CER,CHIP	SA
2203-006890	C308	C-CER,CHIP	SA
2203-007147	C305	C-CER,CHIP	SA
2203-007147	C349	C-CER,CHIP	SA
2203-007165	C562	C-CER,CHIP	SA
2404-001268	TA401	C-TA,CHIP	SA
2404-001339	TA500	C-TA,CHIP	SA
2404-001377	ZD409	C-TA,CHIP	SA
2404-001381	C606	C-TA,CHIP	SA
2404-001381	TA400	C-TA,CHIP	SA
2404-001381	TA402	C-TA,CHIP	SA
2404-001381	TA403	C-TA,CHIP	SA
2404-001381	TA404	C-TA,CHIP	SA
2404-001381	TA501	C-TA,CHIP	SA
2404-001449	TA300	C-TA,CHIP	SA
2404-001449	TA301	C-TA,CHIP	SA
2404-001496	TA100	C-TA,CHIP	SA
2703-001180	L102	INDUCTOR-SMD	SA
2703-001701	L119	INDUCTOR-SMD	SA
2703-001749	L115	INDUCTOR-SMD	SA
2703-001750	L100	INDUCTOR-SMD	SA
2703-001938	L407	INDUCTOR-SMD	SA
2703-001938	L408	INDUCTOR-SMD	SA
2703-002155	L110	INDUCTOR-SMD	SA
2703-002198	L121	INDUCTOR-SMD	SA
2703-002198	L414	INDUCTOR-SMD	SA
2703-002198	L415	INDUCTOR-SMD	SA
2703-002199	L120	INDUCTOR-SMD	SA
2703-002200	L107	INDUCTOR-SMD	SA
2703-002200	L118	INDUCTOR-SMD	SA
2703-002201	L101	INDUCTOR-SMD	SA
2703-002201	L410	INDUCTOR-SMD	SA
2703-002201	L411	INDUCTOR-SMD	SA
2703-002201	L412	INDUCTOR-SMD	SA
2703-002201	L413	INDUCTOR-SMD	SA
2703-002202	L109	INDUCTOR-SMD	SA
2703-002202	L111	INDUCTOR-SMD	SA
2703-002204	L104	INDUCTOR-SMD	SA
2703-002204	L133	INDUCTOR-SMD	SA
2703-002267	L113	INDUCTOR-SMD	SA
2703-002281	L103	INDUCTOR-SMD	SA
2703-002281	L105	INDUCTOR-SMD	SA
2703-002281	L106	INDUCTOR-SMD	SA
2703-002281	L108	INDUCTOR-SMD	SA
2703-002365	L126	INDUCTOR-SMD	SA
2703-002367	L122	INDUCTOR-SMD	SA
2703-002368	L124	INDUCTOR-SMD	SA
2703-002369	L114	INDUCTOR-SMD	SA
2703-002596	L130	INDUCTOR-SMD	SA

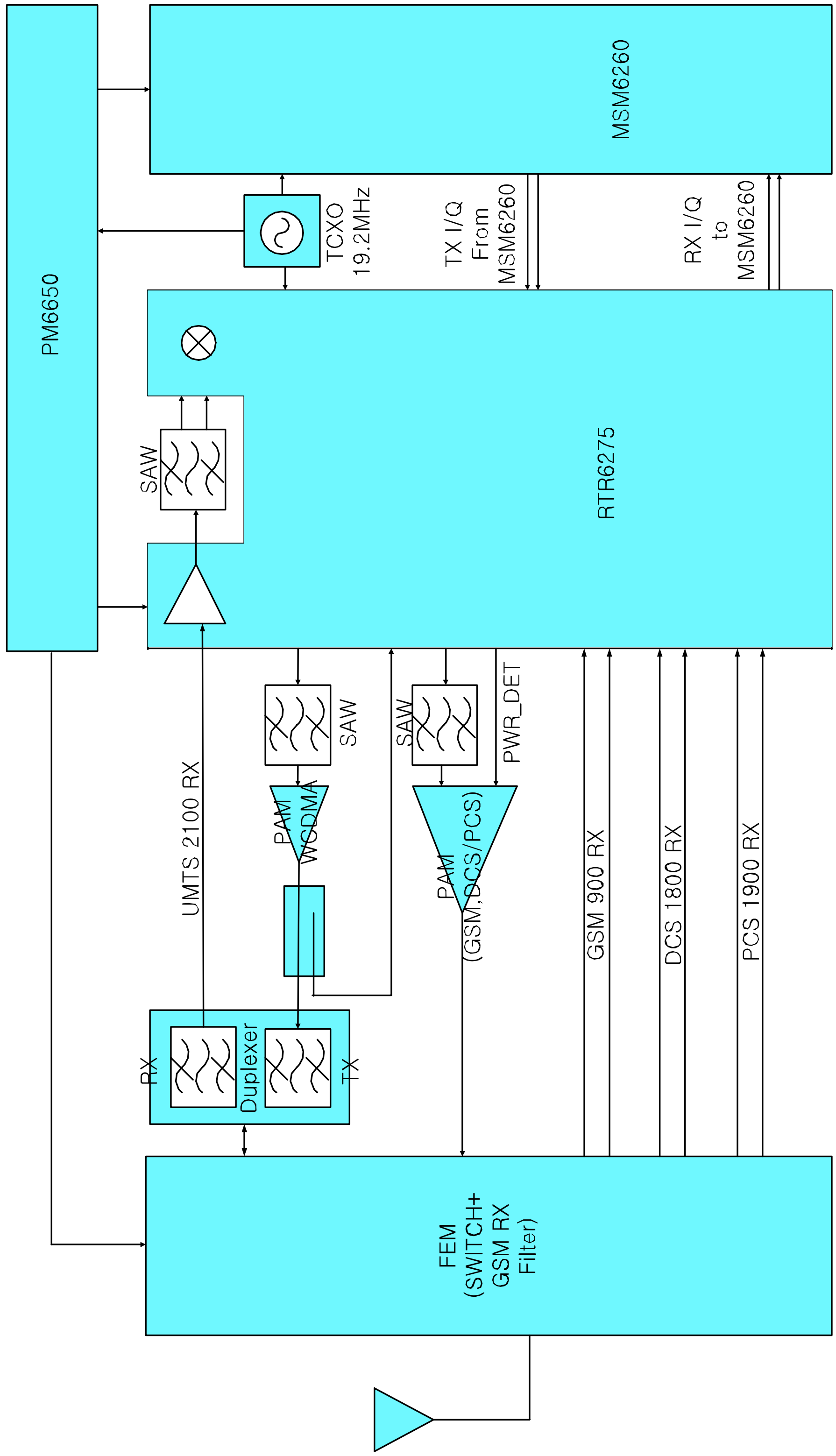
SEC Code	Design LOC	Description	STATUS
2703-002798	L112	INDUCTOR-SMD	SNA
2703-002798	L116	INDUCTOR-SMD	SNA
2703-002893	L501	INDUCTOR-SMD	SA
2703-002919	L117	INDUCTOR-SMD	SA
2703-003182	L304	INDUCTOR-SMD	SA
2703-003182	L305	INDUCTOR-SMD	SA
2703-003184	L300	INDUCTOR-SMD	SA
2703-003184	L301	INDUCTOR-SMD	SA
2703-003184	L302	INDUCTOR-SMD	SA
2703-003184	L303	INDUCTOR-SMD	SA
2703-003240	L306	INDUCTOR-SMD	SA
2801-004189	OSC700	CRYSTAL-SMD	SA
2801-004466	OSC300	CRYSTAL-SMD	SA
2801-004466	OSC500	CRYSTAL-SMD	SA
2801-004466	OSC701	CRYSTAL-SMD	SA
2804-001725	OSC400	OSCILLATOR-CLOCK	SA
2809-001280	TCX100	OSCILLATOR-VCTCXO	SA
2901-001361	F600	FILTER-EMI/ESD	SNA
2901-001361	F602	FILTER-EMI/ESD	SNA
2901-001361	F604	FILTER-EMI/ESD	SNA
2901-001461	F601	FILTER-EMI/ESD	SA
2901-001461	F603	FILTER-EMI/ESD	SA
2904-001629	F105	FILTER-SAW	SA
2904-001702	F101	FILTER-SAW	SA
2904-001703	F102	FILTER-SAW	SA
2904-001738	F103	FILTER-SAW	SA
2904-001759	F104	FILTER-SAW	SA
2910-000004	F107	DUPLEXER-FBAR	SA
2911-000091	F100	DUPLEXER-FEM	SA
3301-001438	L405	BEAD-SMD	SA
3301-001438	L406	BEAD-SMD	SA
3301-001534	L500	BEAD-SMD	SA
3301-001682	L402	BEAD-SMD	SA
3301-001682	L403	BEAD-SMD	SA
3301-001682	L404	BEAD-SMD	SA
3301-001756	L131	BEAD-SMD	SA
3301-001789	L400	BEAD-SMD	SA
3301-001789	L401	BEAD-SMD	SA
3404-001303	SW600	SWITCH-TACT	SA
3404-001303	SW601	SWITCH-TACT	SA
3705-001225	ANT100	CONNECTOR-COAXIAL	SA
3705-001421	RFS100	CONNECTOR-COAXIAL	SA
3708-002222	SLC600	CONNECTOR-FPC/FFC/PIC	SA
3708-002222	SLC601	CONNECTOR-FPC/FFC/PIC	SA
3708-002283	SLC602	CONNECTOR-FPC/FFC/PIC	SA
3709-001465	CD300	CONNECTOR-CARD EDGE	SA
3710-002499	IFC500	SOCKET-INTERFACE	SA
3711-005296	HDC601	HEADER-BOARD TO BOARD	SA
3711-005394	HDC600	HEADER-BOARD TO BOARD	SA
3711-006217	BTC300	HEADER-BATTERY	SA
3711-006277	HDC602	HEADER-BOARD TO BOARD	SA
3711-006277	HDC603	HEADER-BOARD TO BOARD	SA
4202-001356	ANT102	ANTENNA-CHIP	SA

SEC Code	Design LOC	Description	STATUS
4302-001180	BAT500	BATTERY-LI(2ND)	SA
4709-001399	F106	COUPLER-DIRECTION	SA
4709-001527	MOD101	W-LAN MODULE	SA
4709-001544	MOD100	BLUETOOTH MODULE	SA
GH71-06620A	ANT104	NPR-CONTACT INTENA	SA
GH71-06620A	ANT105	NPR-CONTACT INTENA	SA
GH71-06620A	ANT106	NPR-CONTACT INTENA	SA
GH71-07813A	SC100	NPR SHIELD-FRAME A	SA
GH71-07814A	SC101	NPR SHIELD-FRAME B	SA

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

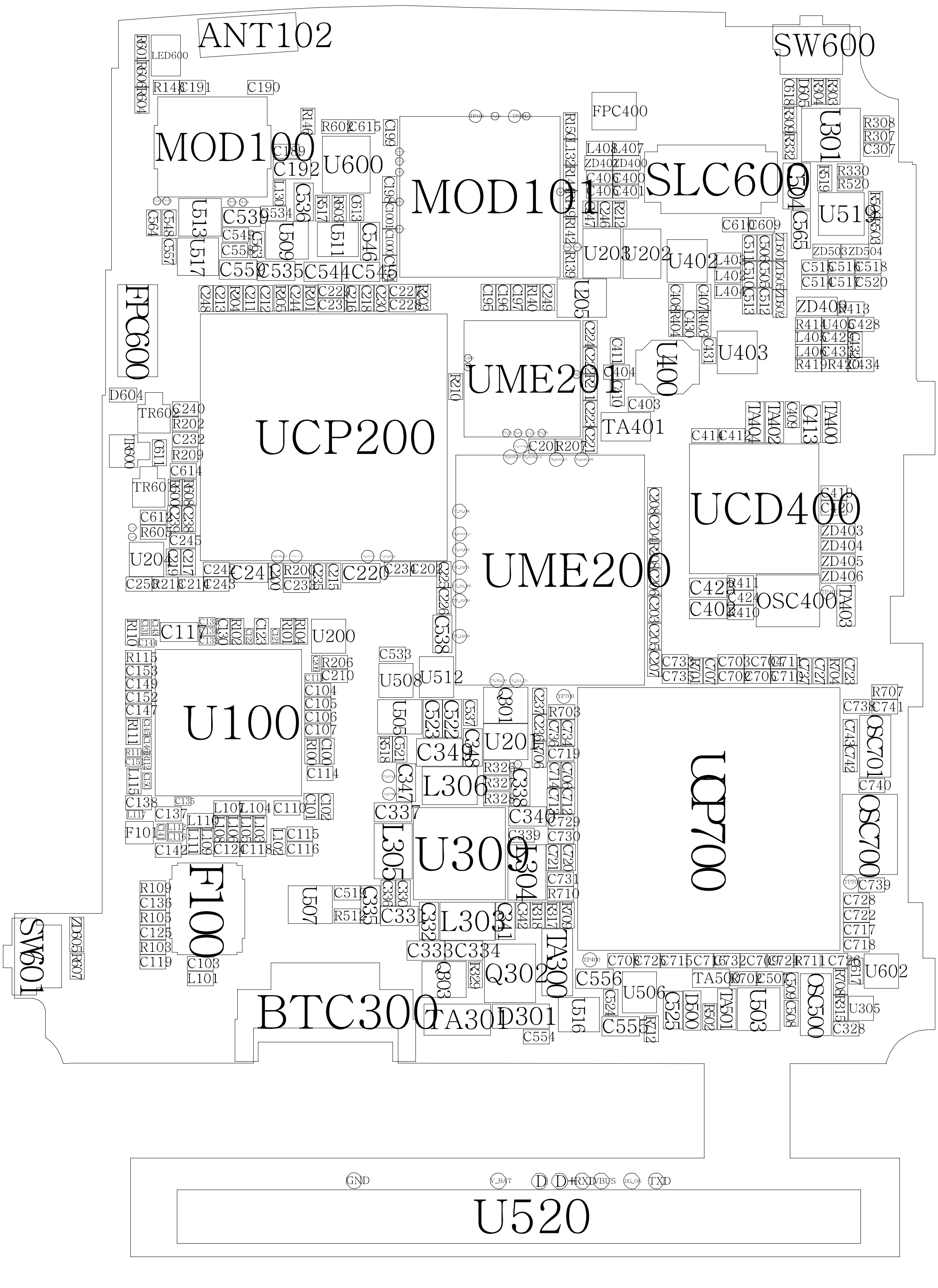
7. Block Diagrams

7-1. RF Solution Block Diagram

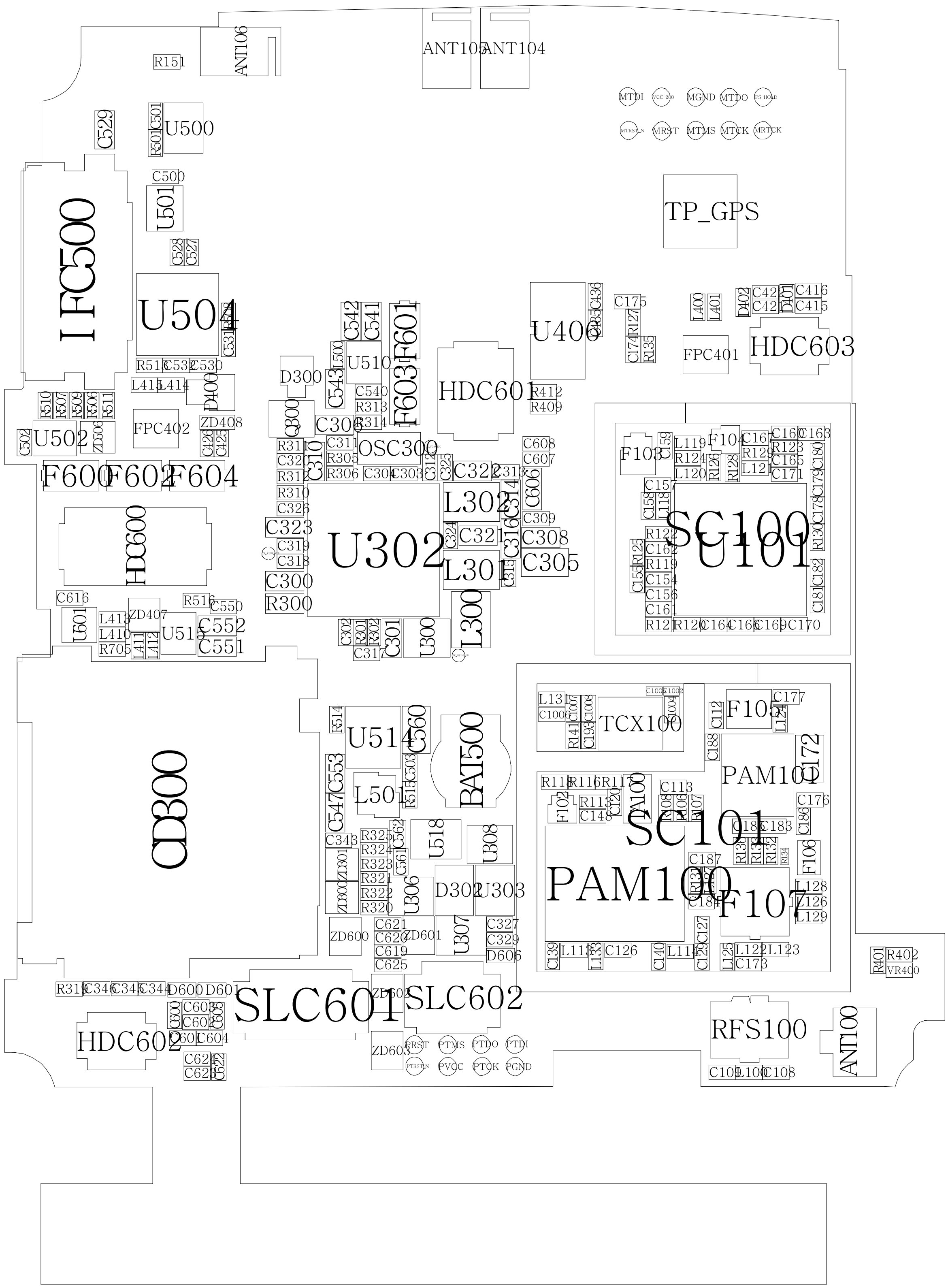


8. PCB Diagrams

8-1. Main top view



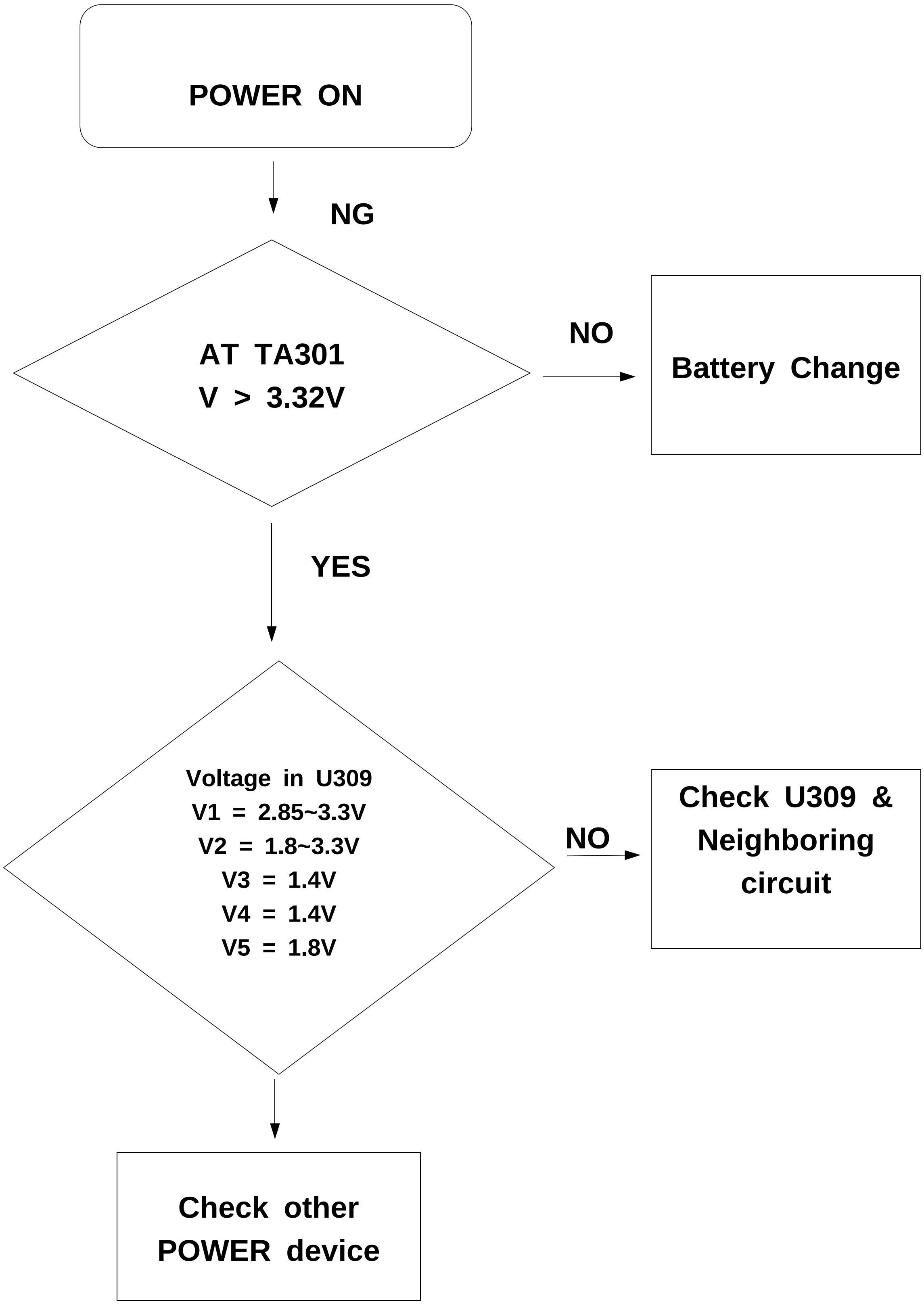
8-2. Main bottom view

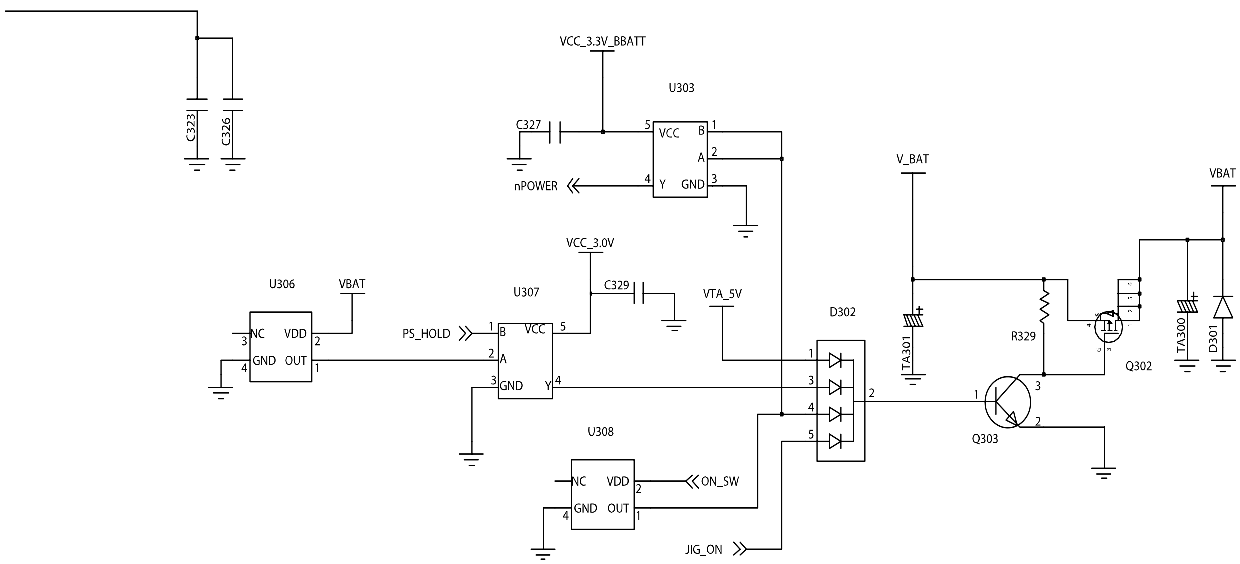


9. Flow Chart of TroubleShooting

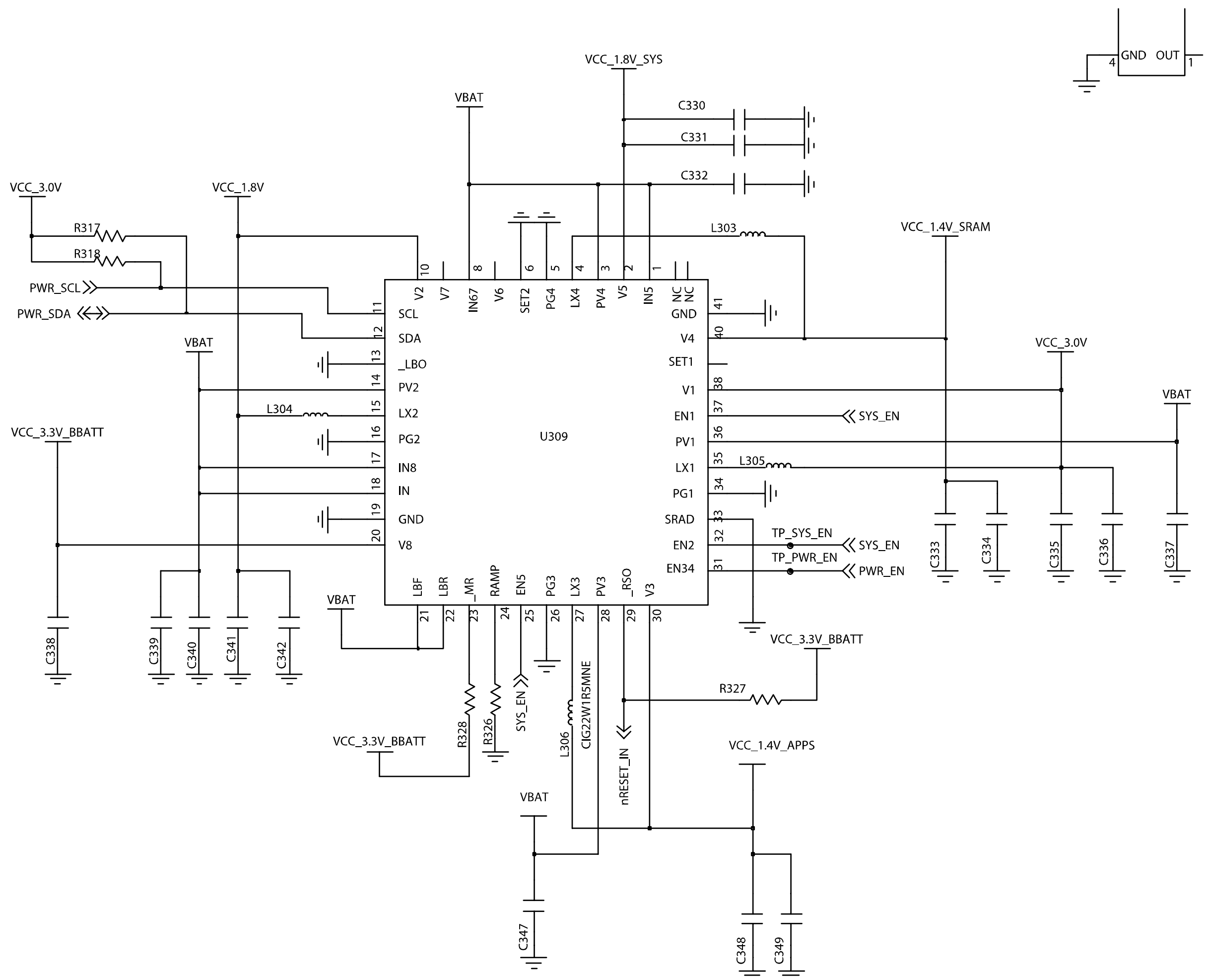
9-1. Power On

- **PDA Part**



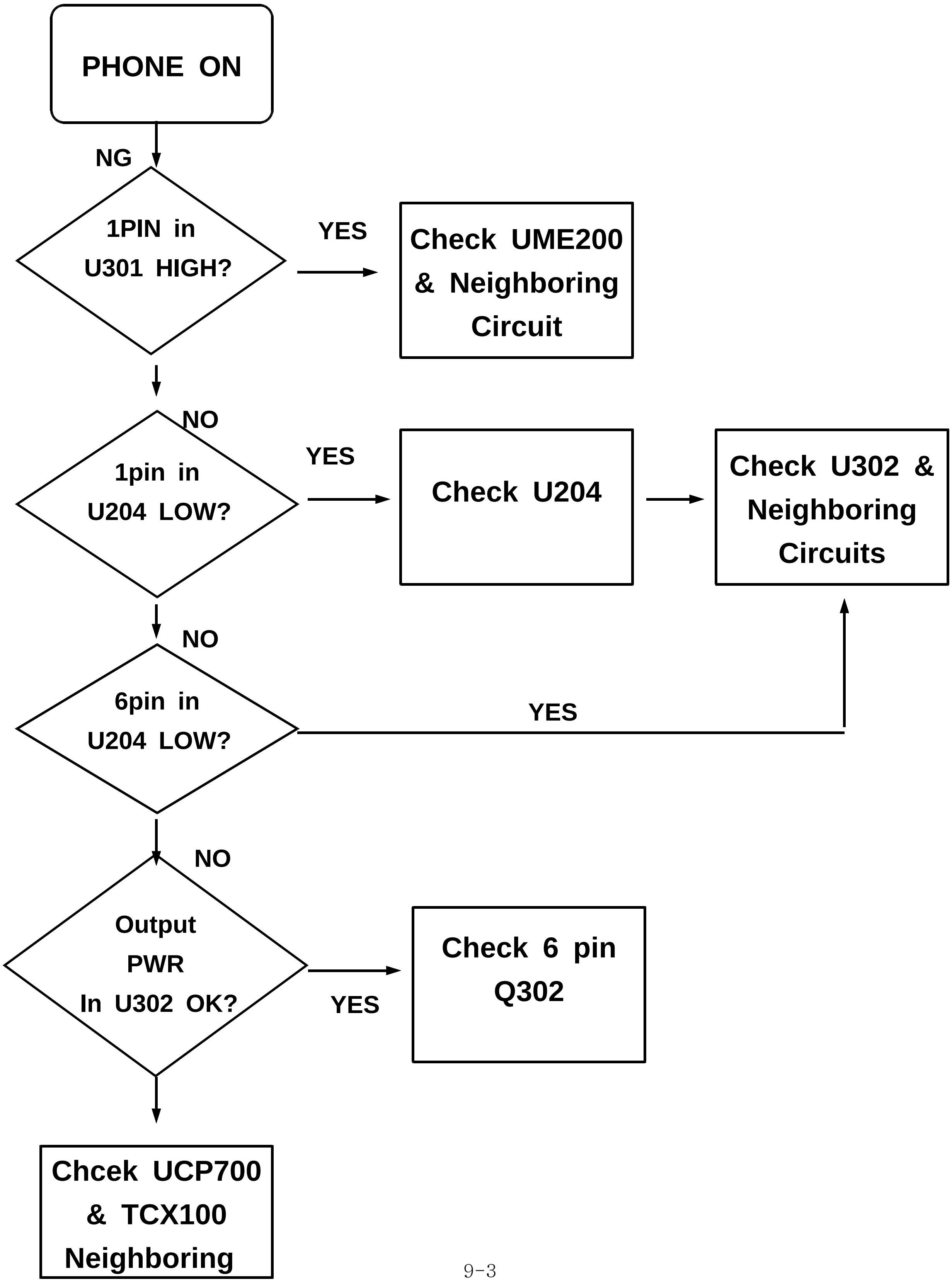


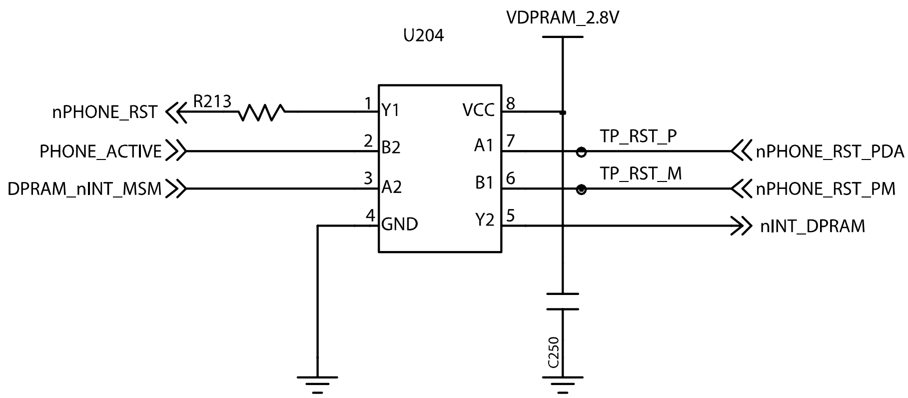
VCC_3.3V_BBATT
U303
C327
VCC
B
A
nPOWER
Y
GND
C323
C326
V_BAT
VBAT
U306
VBAT
NC
VDD
GND
OUT
VCC_3.0V
C329
U307
PS_HOLD
VTA_5V
D302
R329
TA301
TA300
D301
Q302
Q303
U308
ON_SW
JIG_ON

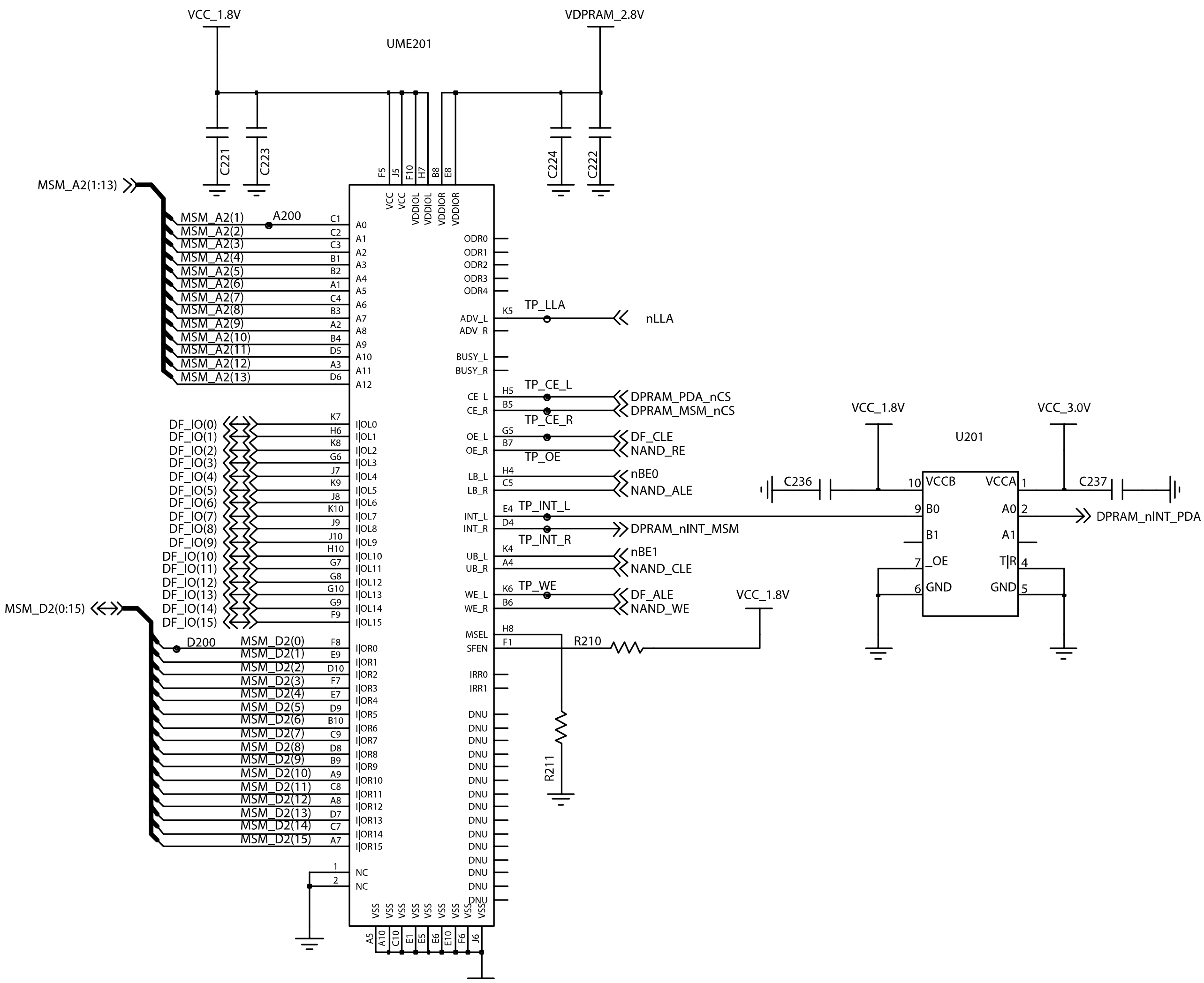


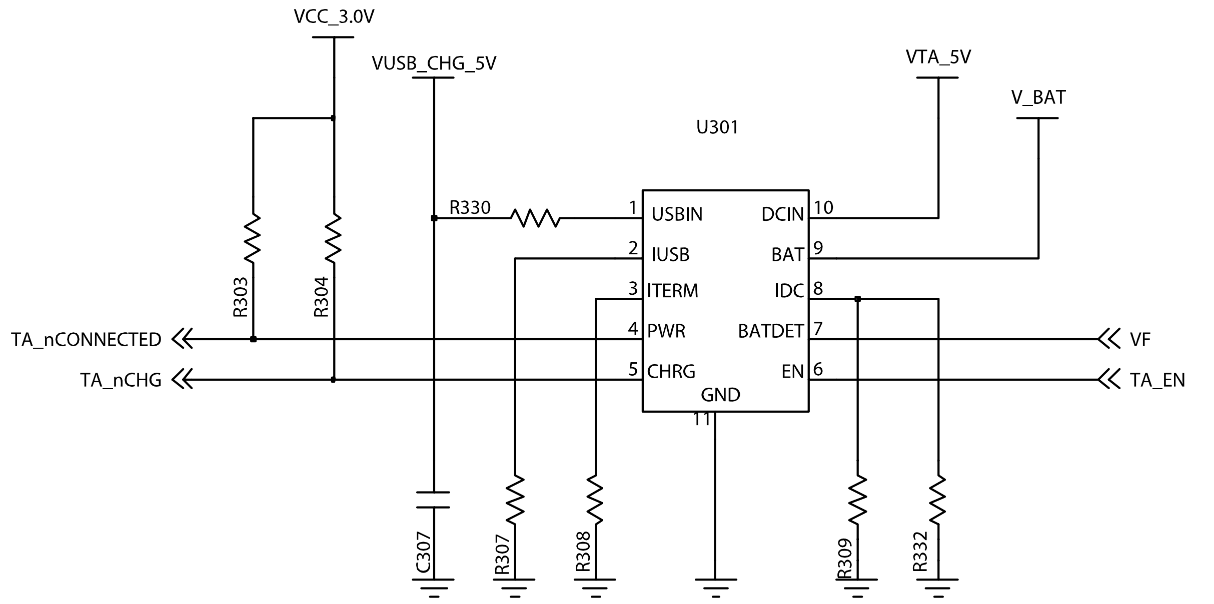
GND
OUT
VCC_1.8V_SYS
VBAT
C330
C331
C332
VCC_3.0V
VCC_1.8V
R317
R318
L303
VCC_1.4V_SRAM
PWR_SCL
PWR_SDA
U309
SCL
SDA
_LBO
PV2
LX2
PG2
IN8
IN
GND
V8
V2
V7
IN67
V6
SET2
PG4
LX4
PV4
V5
IN5
NC
GND
V4
SET1
V1
EN1
PV1
LX1
PG1
SRAD
EN2
EN34
LBF
LBR
_MR
RAMP
EN5
PG3
LX3
PV3
_RSO
V3
L304
L305
VCC_3.3V_BBATT
VCC_3.0V
VBAT
SYS_EN
TP_SYS_EN
TP_PWR_EN
PWR_EN
C333
C334
C335
C336
C337
C338
C339
C340
C341
C342
R327
R328
R326
SYS_EN
L306
CIG22W1R5MNE
nRESET_IN
VCC_1.4V_APPS
C347
C348
C349

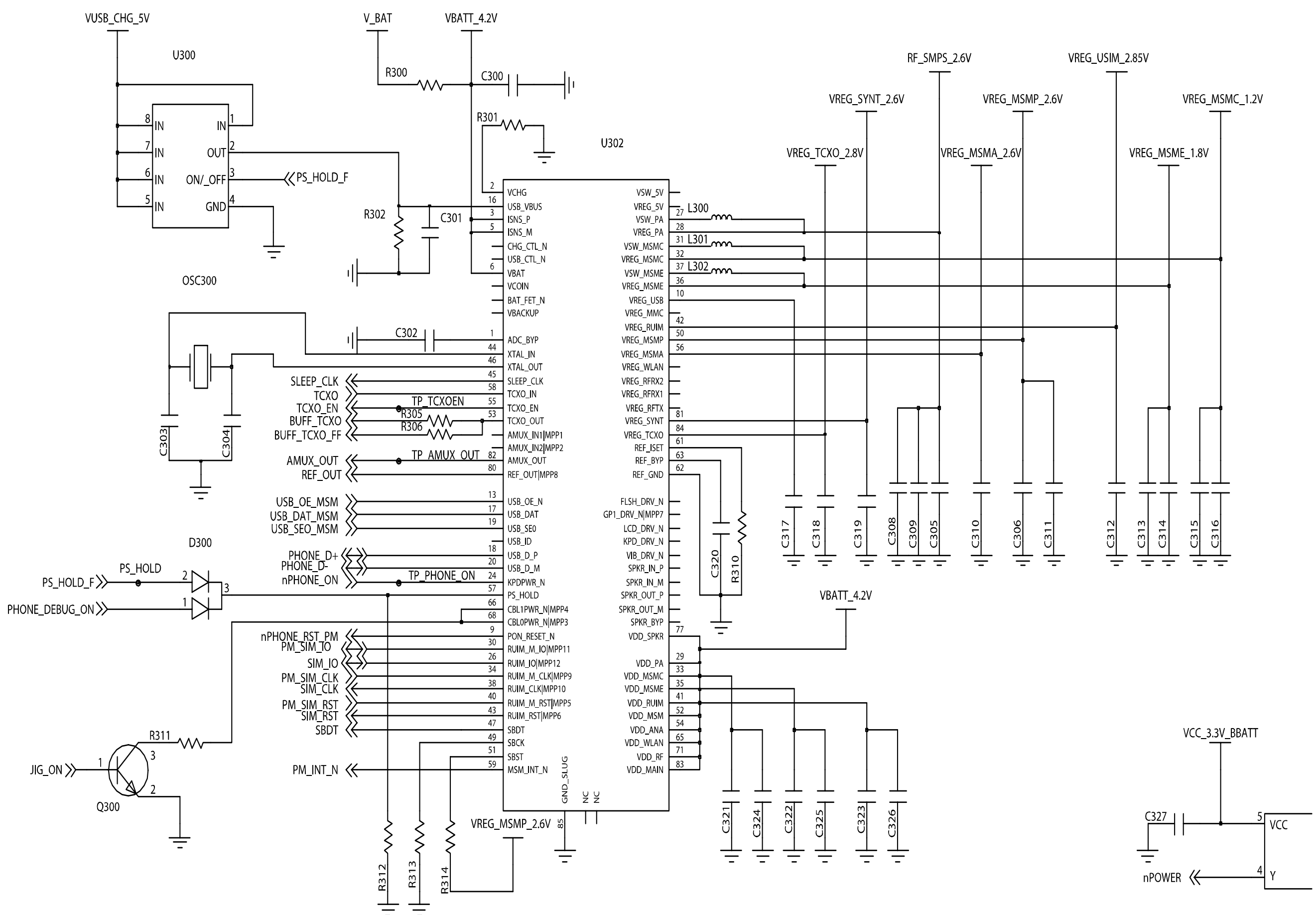
- **PHONE Part**

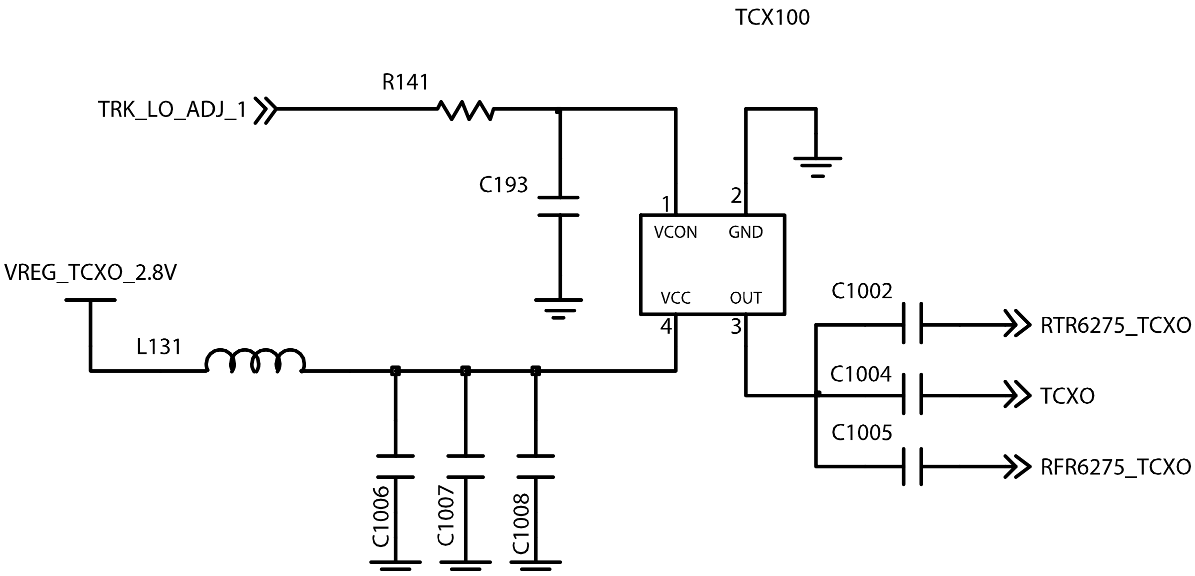

PHONE ON
NG
1PIN in
U301 HIGH?
YES
Check UME200
& Neighboring
Circuit
NO
1pin in
U204 LOW?
YES
Check U204
Check U302 &
Neighboring
Circuits
NO
6pin in
U204 LOW?
YES
NO
Output
PWR
In U302 OK?
YES
Check 6 pin
Q302
Chcek UCP700
& TCX100
Neighboring

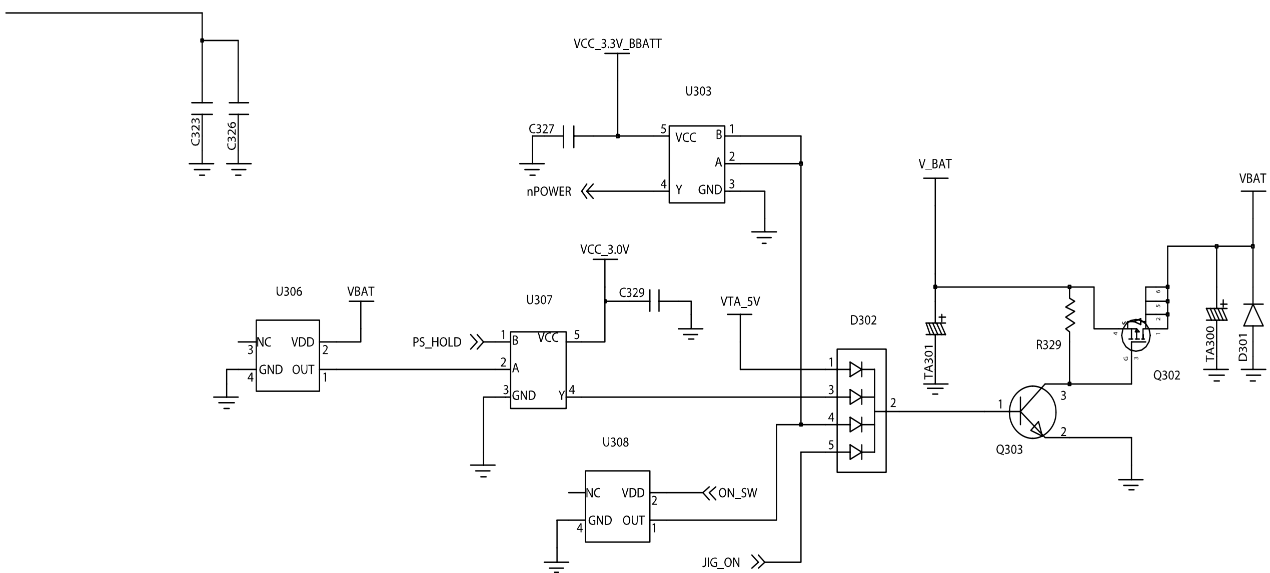

U204
VDPRAM_2.8V
nPHONE_RST
R213
PHONE_ACTIVE
DPRAM_nINT_MSM
Y1
B2
A2
GND
VCC
A1
B1
Y2
TP_RST_P
TP_RST_M
nPHONE_RST_PDA
nPHONE_RST_PM
nINT_DPRAM
C250

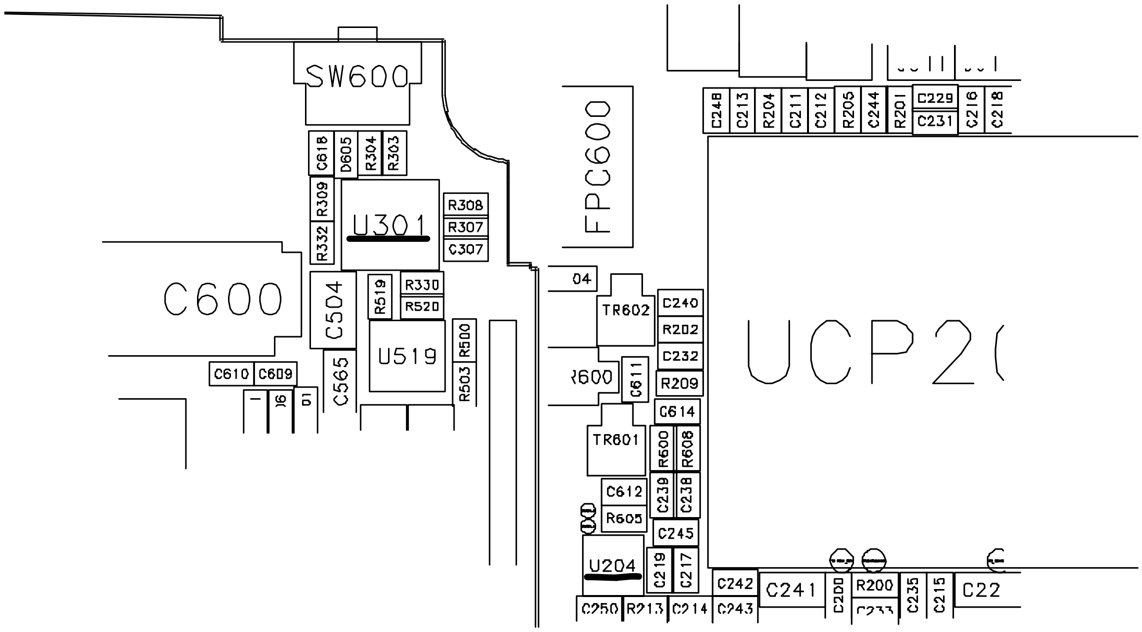

VCC_1.8V
VDPRAM_2.8V
UME201
C221
C223
C224
C222
MSM_A2(1:13)
A200
MSM_D2(0:15)
D200
TP_LLA
nLLA
TP_CE_L
TP_CE_R
DPRAM_PDA_nCS
DPRAM_MSM_nCS
TP_OE
DF_CLE
NAND_RE
nBE0
NAND_ALE
TP_INT_L
TP_INT_R
DPRAM_nINT_MSM
nBE1
NAND_CLE
TP_WE
DF_ALE
NAND_WE
R210
R211
U201
VCC_3.0V
C236
C237
DPRAM_nINT_PDA

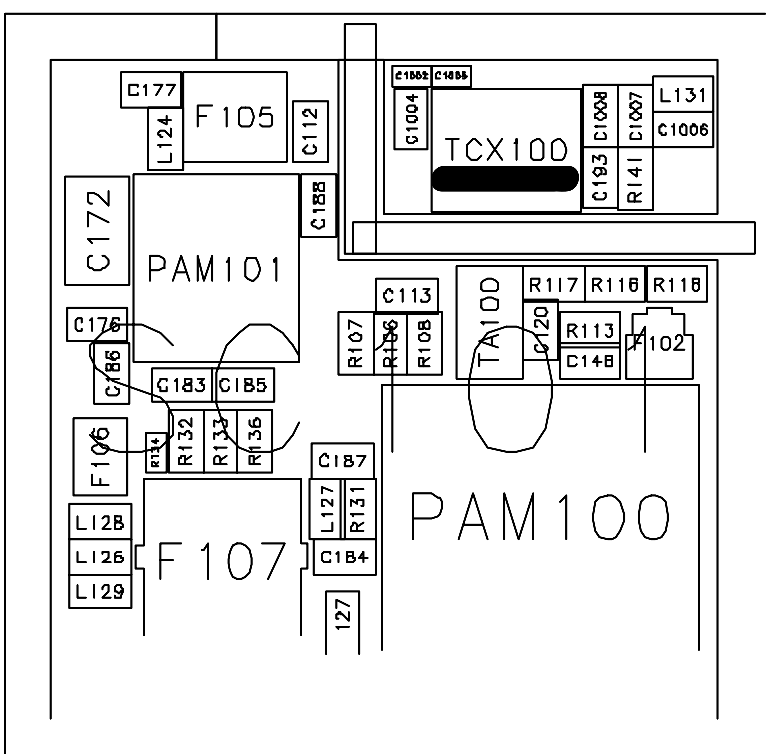

VCC_3.0V
VUSB_CHG_5V
VTA_5V
V_BAT
U301
R330
USBIN
IUSB
ITERM
PWR
CHRG
GND
DCIN
BAT
IDC
BATDET
EN
R303
R304
TA_nCONNECTED
TA_nCHG
VF
TA_EN
C307
R307
R308
R309
R332

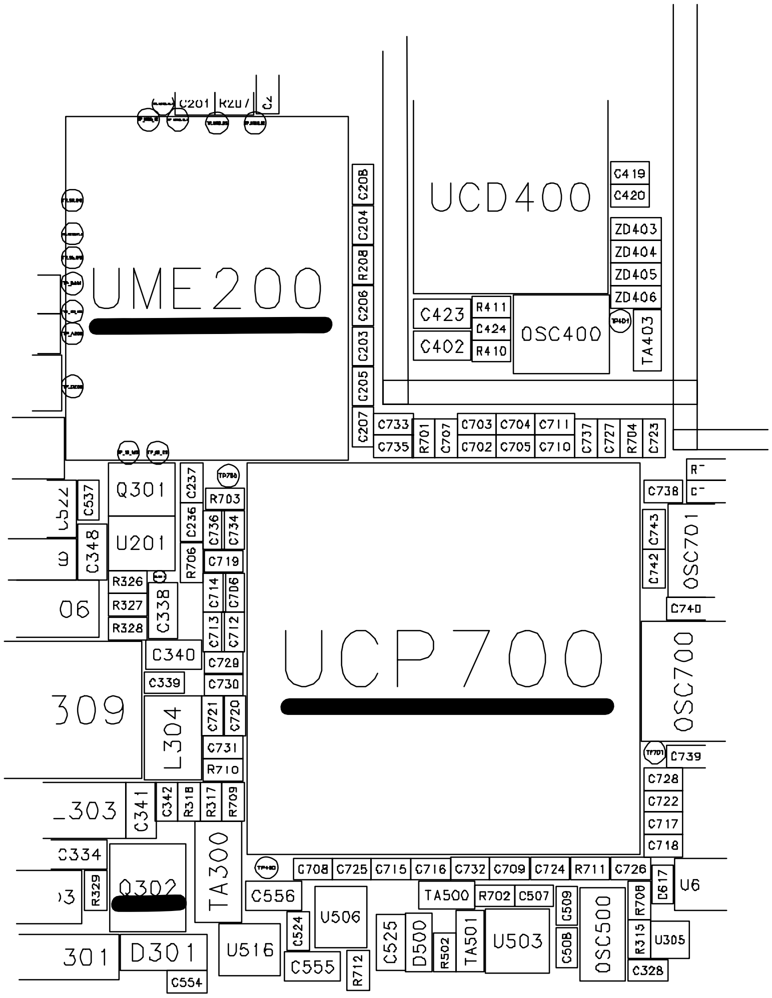

VUSB_CHG_5V
U300
V_BAT
VBATT_4.2V
R300
C300
R301
U302
R302
C301
PS_HOLD_F
OSC300
C302
C303
C304
SLEEP_CLK
TCXO
TCXO_EN
BUFF_TCXO
BUFF_TCXO_FF
TP_TCXOEN
R305
R306
AMUX_OUT
REF_OUT
TP_AMUX_OUT
USB_OE_MSM
USB_DAT_MSM
USB_SEO_MSM
D300
PS_HOLD
PHONE_DEBUG_ON
PHONE_D+
PHONE_D-
nPHONE_ON
TP_PHONE_ON
nPHONE_RST_PM
PM_SIM_IO
SIM_IO
PM_SIM_CLK
SIM_CLK
PM_SIM_RST
SIM_RST
SBDT
R311
JIG_ON
Q300
PM_INT_N
VREG_MSMP_2.6V
R312
R313
R314
RF_SMPS_2.6V
VREG_USIM_2.85V
VREG_SYNT_2.6V
VREG_MSMP_2.6V
VREG_MSMC_1.2V
VREG_TCXO_2.8V
VREG_MSMA_2.6V
VREG_MSME_1.8V
L300
L301
L302
C317
C318
C319
C308
C309
C305
C310
C306
C311
C312
C313
C314
C315
C316
C320
R310
VBATT_4.2V
C321
C324
C322
C325
C323
C326
VCC_3.3V_BBATT
C327
nPOWER
VCC
Y


TCX100
R141
TRK_LO_ADJ_1
C193
1
2
VCON
GND
VCC
OUT
4
3
VREG_TCXO_2.8V
L131
C1002
RTR6275_TCXO
C1004
TCXO
C1005
RFR6275_TCXO
C1006
C1007
C1008

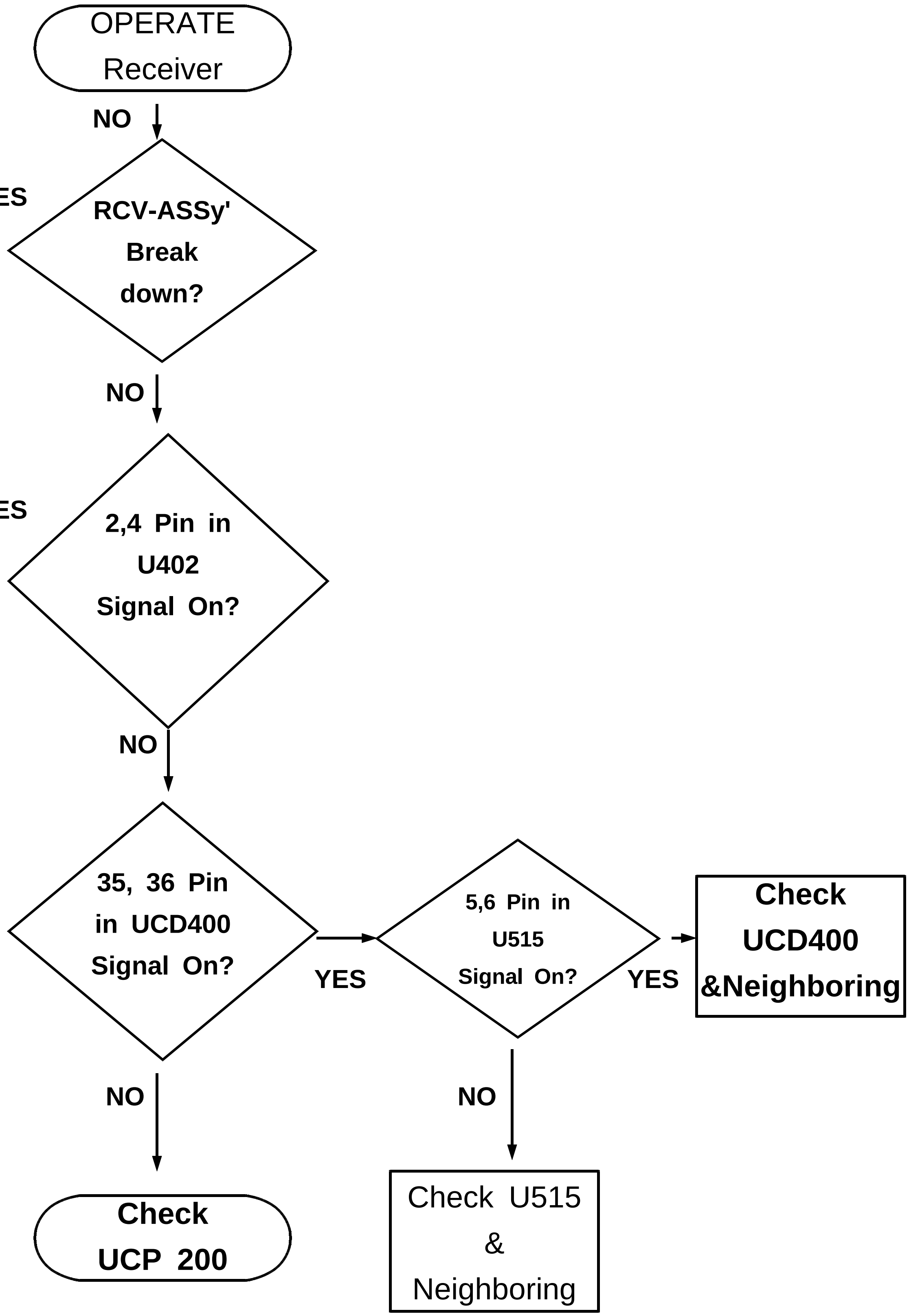

C323
C326
VCC_3.3V_BBATT
U303
C327
VCC
B
A
Y
GND
nPOWER
V_BAT
VBAT
VCC_3.0V
U306
VBAT
U307
C329
VTA_5V
D302
NC
VDD
GND
OUT
PS_HOLD
R329
Q302
TA301
TA300
D301
Q303
U308
ON_SW
JIG_ON

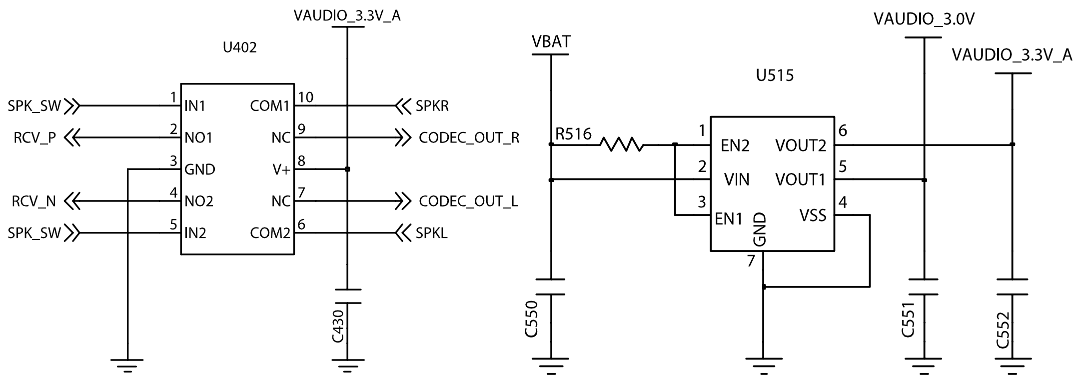

SW600
C618
D605
R304
R303
R309
R332
U301
R308
R307
C307
C600
C504
R519
R330
R520
U519
R500
R503
C565
C610
C609
FPC600
04
TR602
R600
C611
TR601
C612
R605
U204
C240
R202
C232
R209
C614
R600
R608
C239
C238
C245
C219
C217
C242
C243
C241
C200
R200
C235
C215
C250
R213
C214
C248
C213
R204
C211
C212
R205
C244
R201
C229
C231
C216
C218
UCP2(

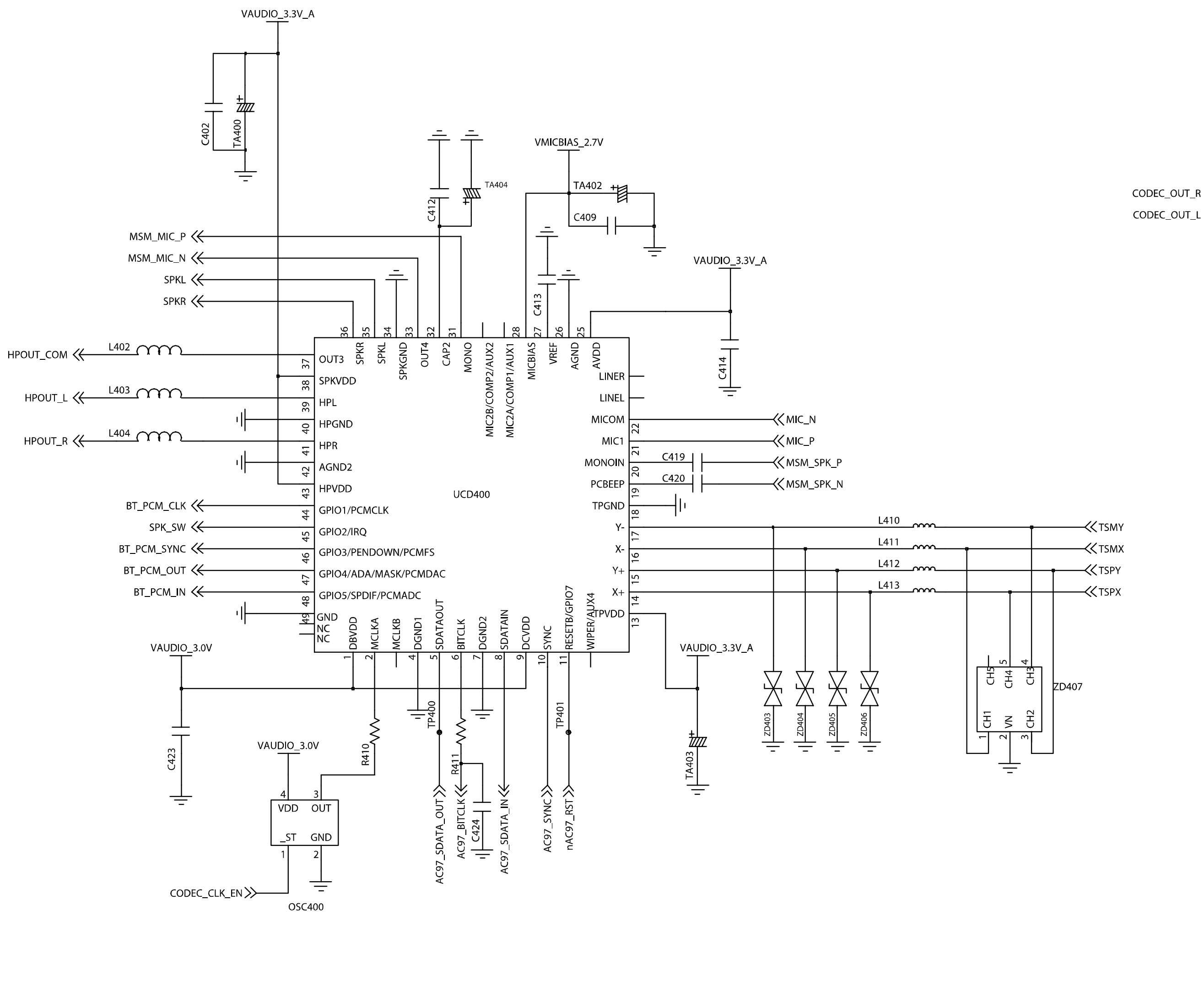

C177
F105
L124
C112
C1004
TCX100
C1008
C1007
L131
C1006
C193
R141
C172
PAM101
C188
C113
R107
R106
R108
TA100
C120
R117
R116
R118
R113
C148
F102
C176
C186
C183
C185
F106
R134
R132
R133
R136
C187
L127
R131
PAM100
L128
L126
L129
F107
C184
127

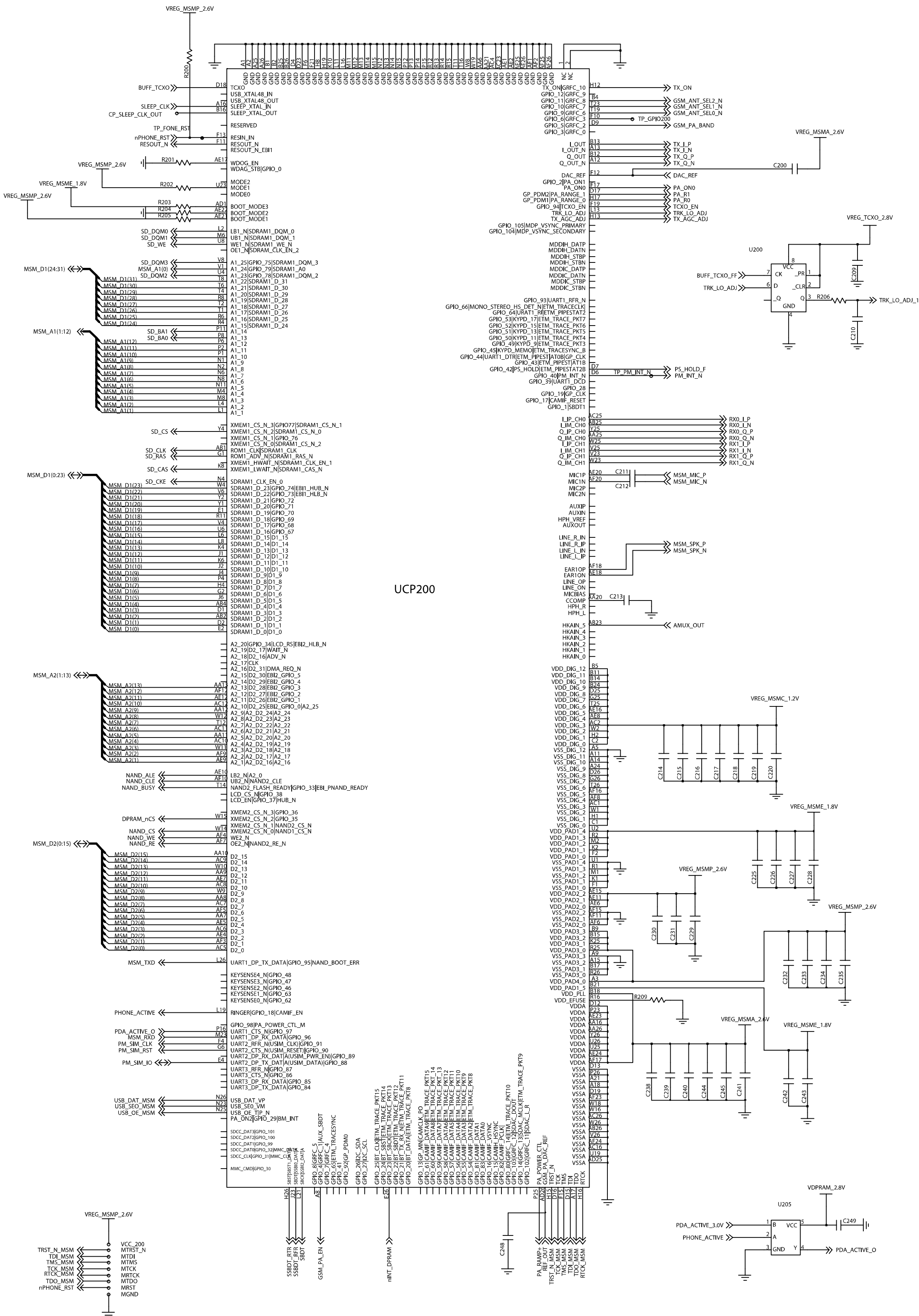

UME200
UCD400
UCP700
OSC400
OSC700
OSC701
OSC500
C201
R207
C208
C204
R208
C206
C203
C205
C207
C419
C420
ZD403
ZD404
ZD405
ZD406
C423
C402
R411
C424
R410
TA403
C733
C735
R701
C707
C703
C702
C704
C705
C711
C710
C737
C727
R704
C723
C738
C743
C742
C740
C739
C728
C722
C717
C718
Q301
U201
C537
C348
R326
R327
R328
C338
C340
C339
309
L304
C237
R703
C236
C736
C734
R706
C719
C714
C706
C713
C712
C729
C730
C721
C720
C731
R710
303
C341
C342
R318
R317
R709
C334
R329
Q302
TA300
D301
C554
U516
C556
U506
C524
C555
R712
C708
C725
C715
C716
C732
C709
C724
R711
C726
C617
U6
TA500
R702
C507
C509
C525
D500
R502
TA501
U503
C508
R708
R315
U305
C328
06
301

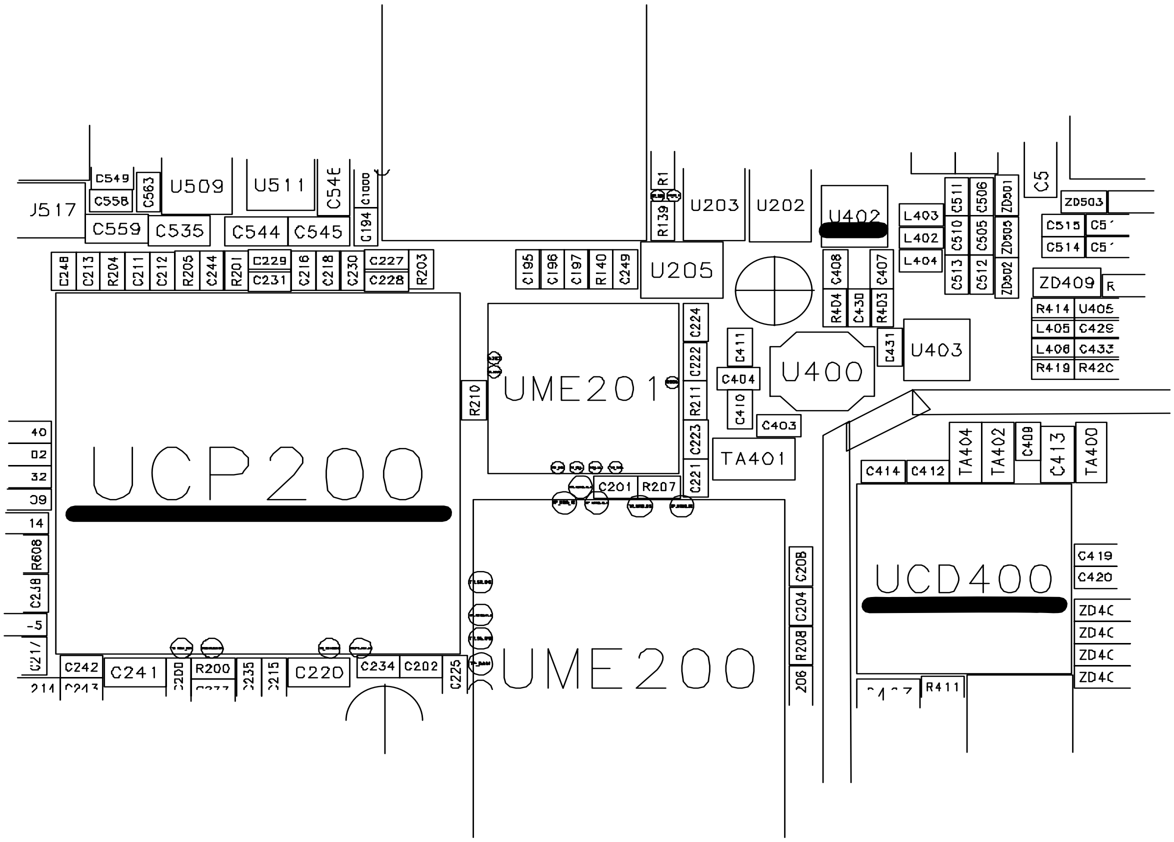
9-2. RECEIVER Working



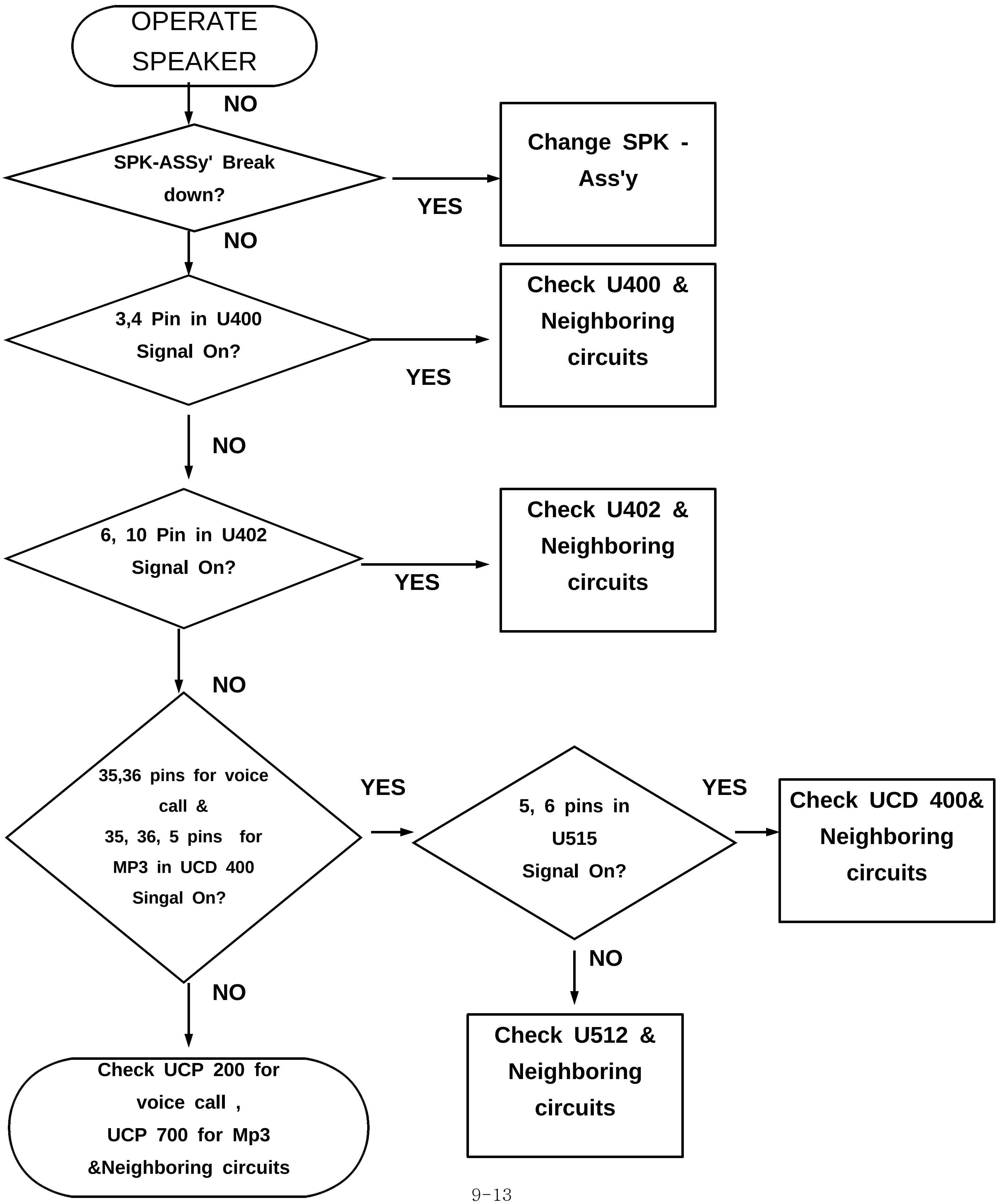

U402
VAUDIO_3.3V_A
SPK_SW
RCV_P
RCV_N
SPK_SW
IN1
NO1
GND
NO2
IN2
COM1
NC
V+
NC
COM2
SPKR
CODEC_OUT_R
CODEC_OUT_L
SPKL
C430
VBAT
R516
C550
U515
EN2
VIN
EN1
GND
VOUT2
VOUT1
VSS
VAUDIO_3.0V
VAUDIO_3.3V_A
C551
C552

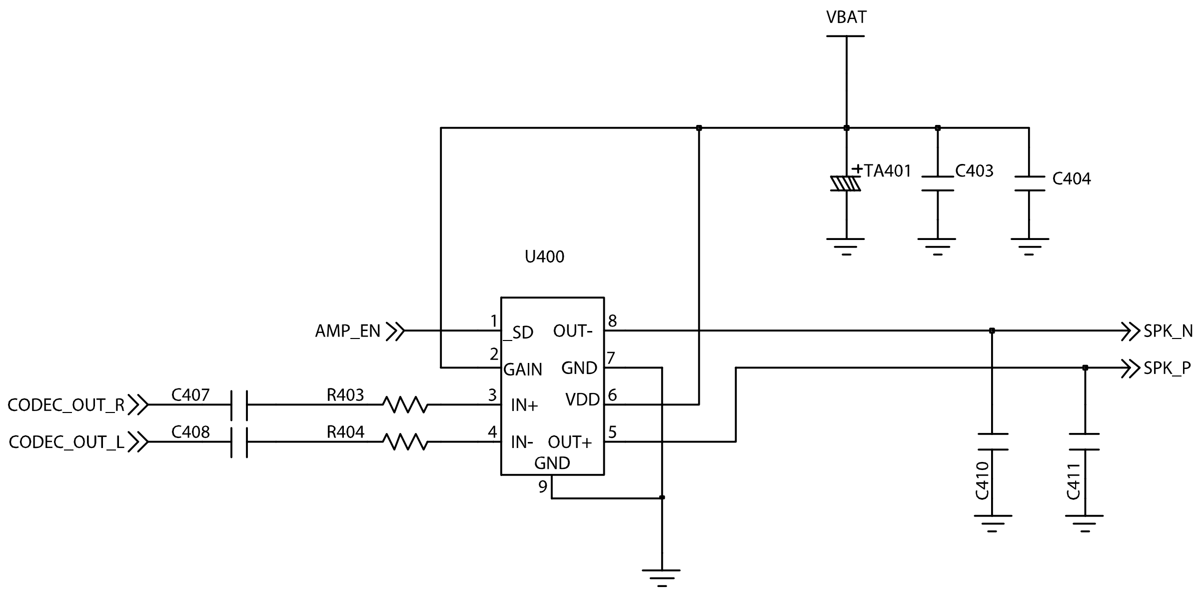

VAUDIO_3.3V_A
C402
TA400
VMICBIAS_2.7V
TA404
C412
TA402
C409
C413
VAUDIO_3.3V_A
C414
CODEC_OUT_R
CODEC_OUT_L
MSM_MIC_P
MSM_MIC_N
SPKL
SPKR
HPOUT_COM
HPOUT_L
HPOUT_R
L402
L403
L404
OUT3
SPKVDD
HPL
HPGND
HPR
AGND2
HPVDD
GPIO1/PCMCLK
GPIO2/IRQ
GPIO3/PENDOWN/PCMFS
GPIO4/ADA/MASK/PCMDAC
GPIO5/SPDIF/PCMADC
GND
NC
NC
UCD400
SPKR
SPKL
SPKGND
OUT4
CAP2
MONO
MIC2B/COMP2/AUX2
MIC2A/COMP1/AUX1
MICBIAS
VREF
AGND
AVDD
LINER
LINEL
MICOM
MIC1
MONOIN
PCBEEP
TPGND
Y-
X-
Y+
X+
TPVDD
MIC_N
MIC_P
C419
C420
MSM_SPK_P
MSM_SPK_N
L410
L411
L412
L413
TSMY
TSMX
TSPY
TSPX
BT_PCM_CLK
SPK_SW
BT_PCM_SYNC
BT_PCM_OUT
BT_PCM_IN
DBVDD
MCLKA
MCLKB
DGND1
SDATAOUT
BITCLK
DGND2
SDATAIN
DCVDD
SYNC
RESETB/GPIO7
WIPER/AUX4
VAUDIO_3.0V
C423
R410
TP400
R411
TP401
VAUDIO_3.3V_A
TA403
ZD403
ZD404
ZD405
ZD406
ZD407
CH5
CH4
CH3
CH1
VN
CH2
VAUDIO_3.0V
VDD
OUT
_ST
GND
OSC400
CODEC_CLK_EN
AC97_SDATA_OUT
AC97_BITCLK
C424
AC97_SDATA_IN
AC97_SYNC
nAC97_RST

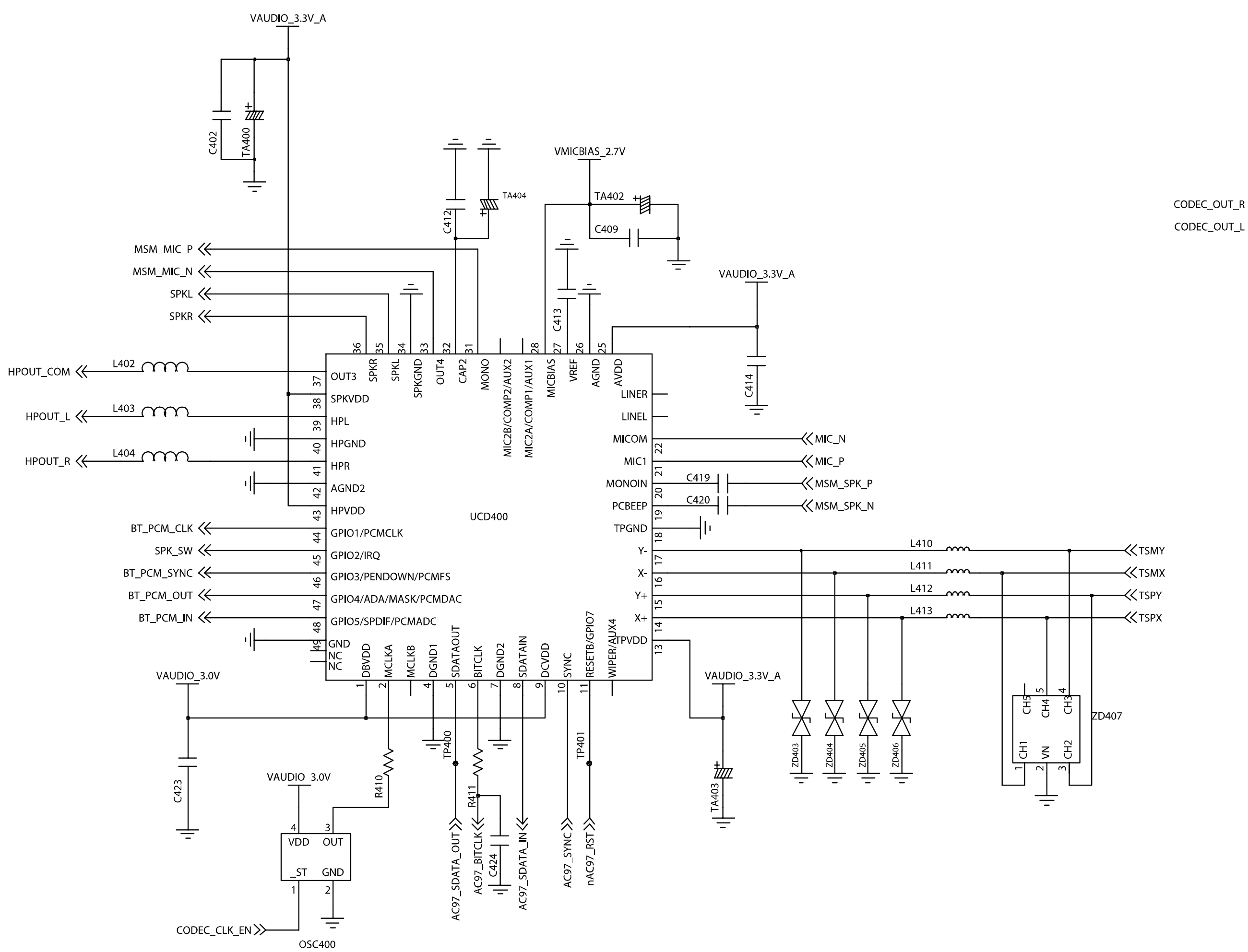

UCP200

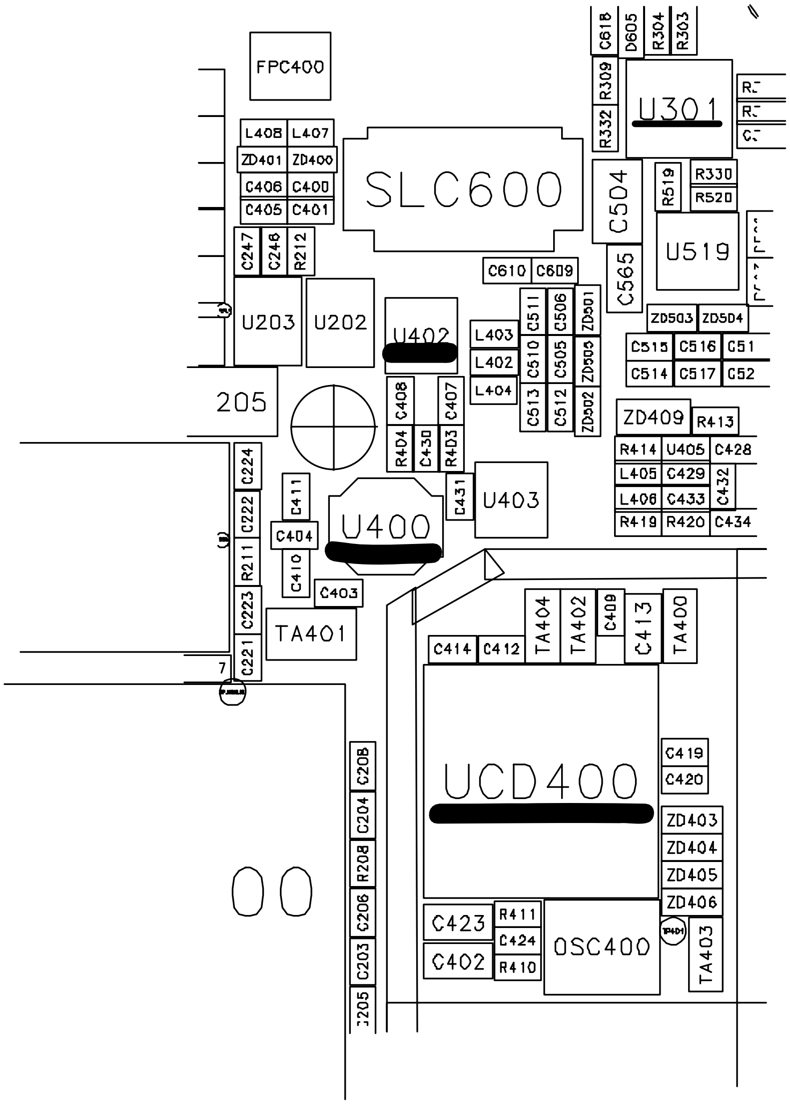

UCP200
UME201
UME200
UCD400
U400
U402
U403
U205
U203
U202
U509
U511
J517
C549
C558
C563
C559
C535
C544
C545
C194
C248
C213
R204
C211
C212
R205
C244
R201
C229
C231
C216
C218
C230
C227
C228
R203
C195
C196
C197
R140
C249
R139
R1
R210
C224
C222
R211
C223
C221
C201
R207
C411
C404
C410
C403
TA401
C408
C407
R404
C430
R403
C431
L403
L402
L404
C511
C506
ZD501
C510
C505
ZD503
C513
C512
ZD502
ZD503
C515
C514
ZD409
R414
U405
L405
L406
R419
C414
C412
TA404
TA402
C409
C413
TA400
C419
C420
C208
C204
R208
R608
C242
C241
R200
C220
C234
C202
C225
R411

9-3. SPEAKER Working

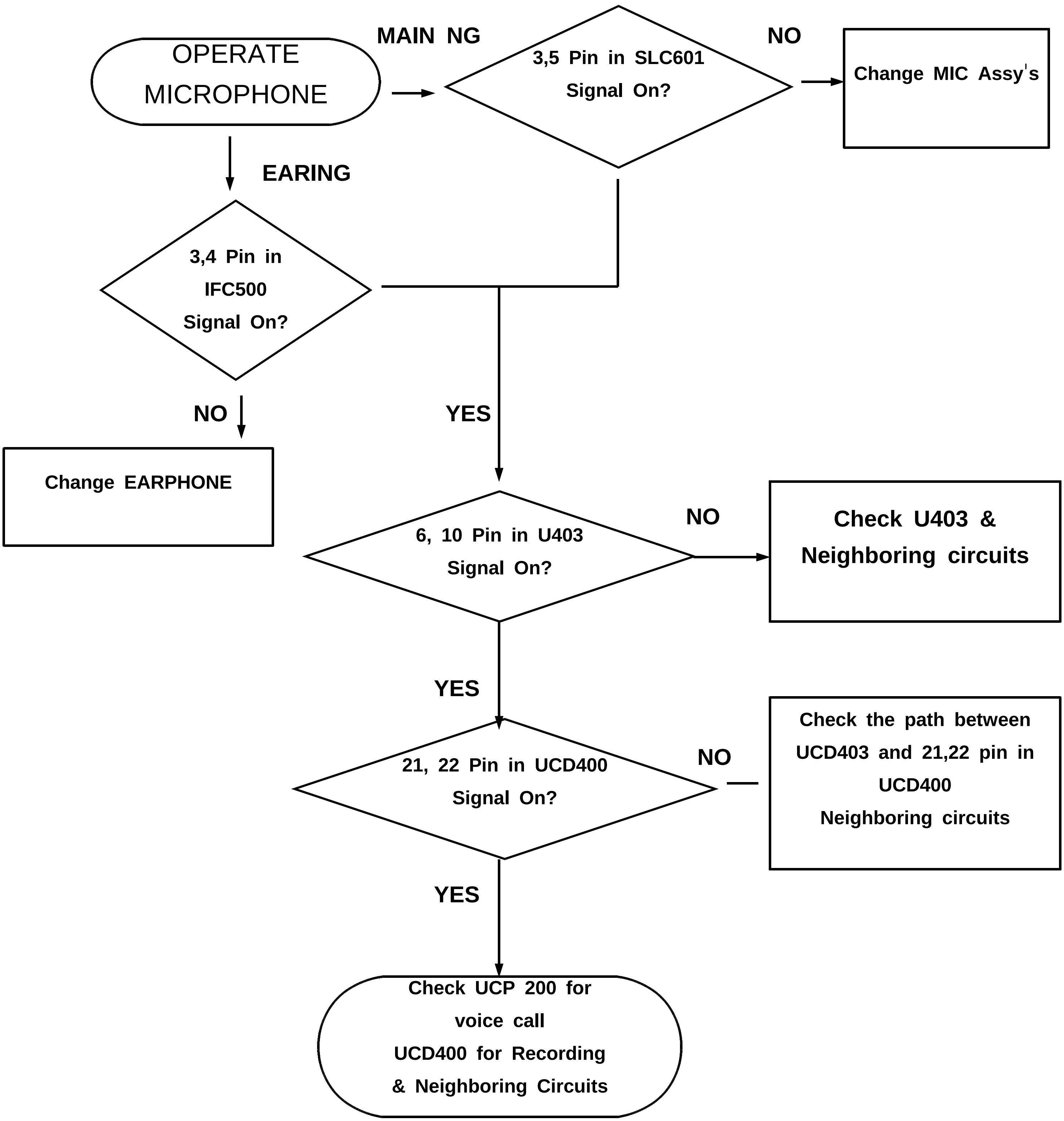


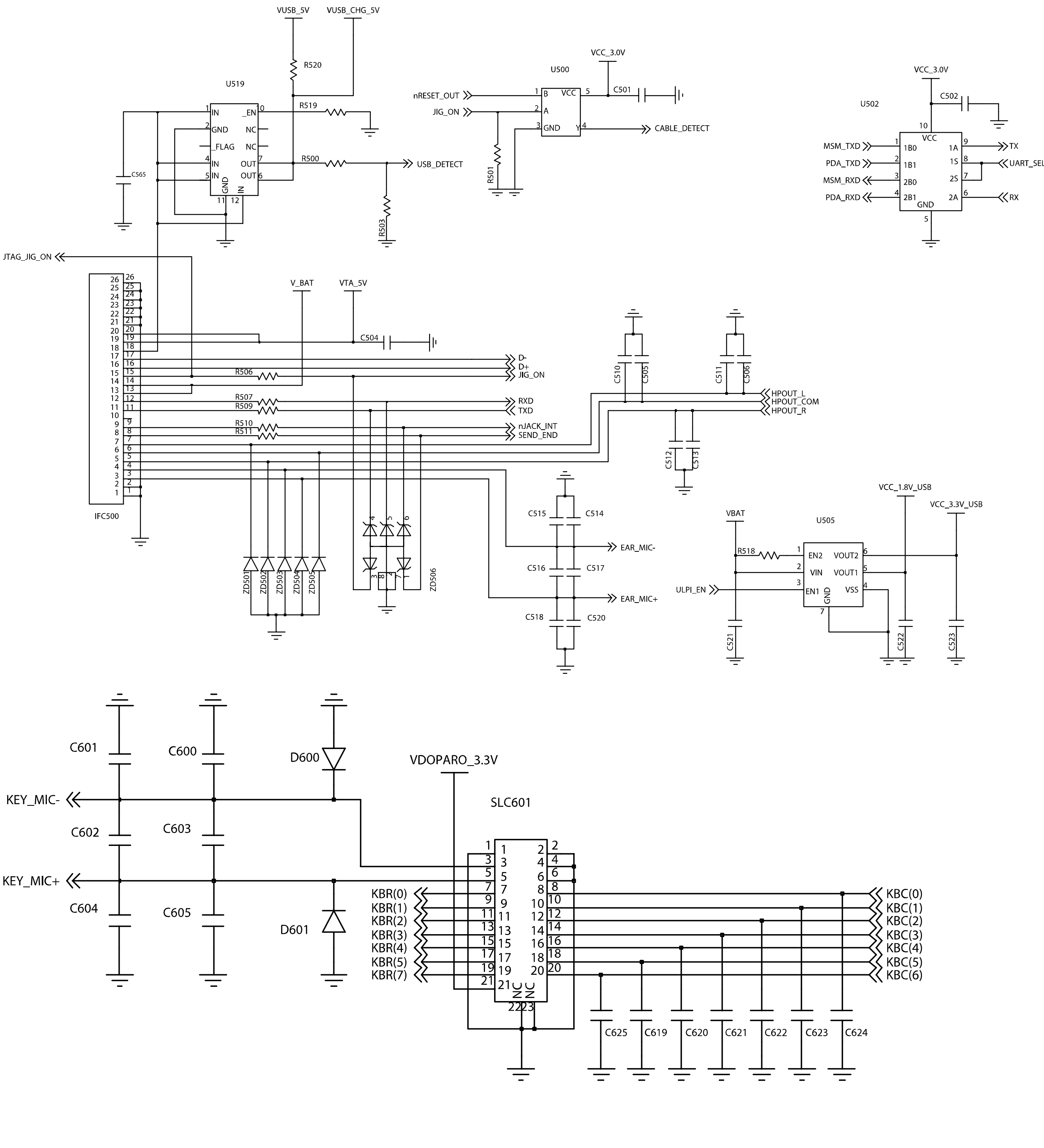

VBAT
TA401
C403
C404
U400
AMP_EN
_SD
OUT-
GAIN
GND
IN+
VDD
IN-
OUT+
GND
SPK_N
SPK_P
CODEC_OUT_R
CODEC_OUT_L
C407
C408
R403
R404
C410
C411

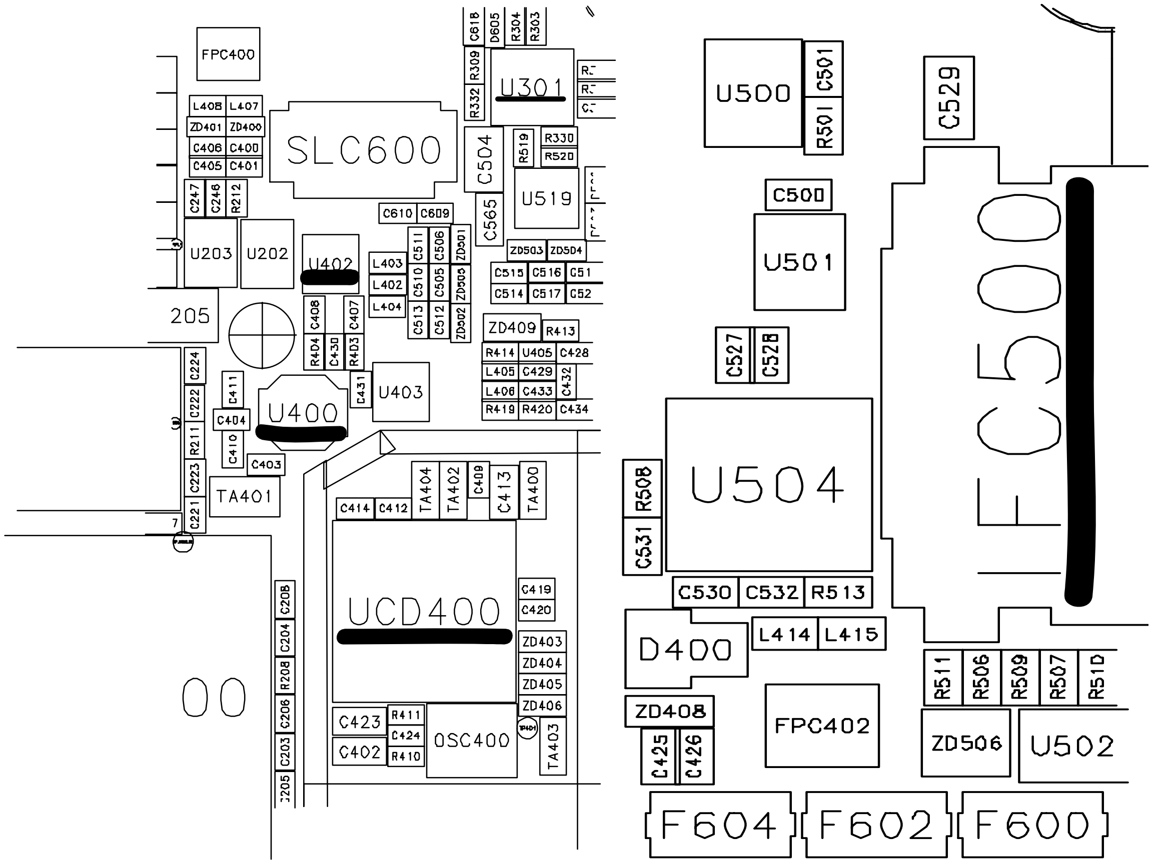

VAUDIO_3.3V_A
C402
TA400
C412
TA404
VMICBIAS_2.7V
TA402
C409
MSM_MIC_P
MSM_MIC_N
SPKL
SPKR
C413
C414
CODEC_OUT_R
CODEC_OUT_L
HPOUT_COM
HPOUT_L
HPOUT_R
L402
L403
L404
OUT3
SPKVDD
HPL
HPGND
HPR
AGND2
HPVDD
GPIO1/PCMCLK
GPIO2/IRQ
GPIO3/PENDOWN/PCMFS
GPIO4/ADA/MASK/PCMDAC
GPIO5/SPDIF/PCMADC
UCD400
BT_PCM_CLK
SPK_SW
BT_PCM_SYNC
BT_PCM_OUT
BT_PCM_IN
LINER
LINEL
MICOM
MIC1
MONOIN
PCBEEP
TPGND
MIC_N
MIC_P
C419
C420
MSM_SPK_P
MSM_SPK_N
L410
L411
L412
L413
TSMY
TSMX
TSPY
TSPX
ZD403
ZD404
ZD405
ZD406
ZD407
VAUDIO_3.0V
C423
R410
OSC400
CODEC_CLK_EN
TP400
TP401
R411
C424
TA403
AC97_SDATA_OUT
AC97_BITCLK
AC97_SDATA_IN
AC97_SYNC
nAC97_RST


FPC400
SLC600
U301
C504
U519
C565
U203
U202
U402
205
U400
U403
ZD409
TA401
UCD400
OSC400
C423
C402
TA404
TA402
C413
TA400
TA403

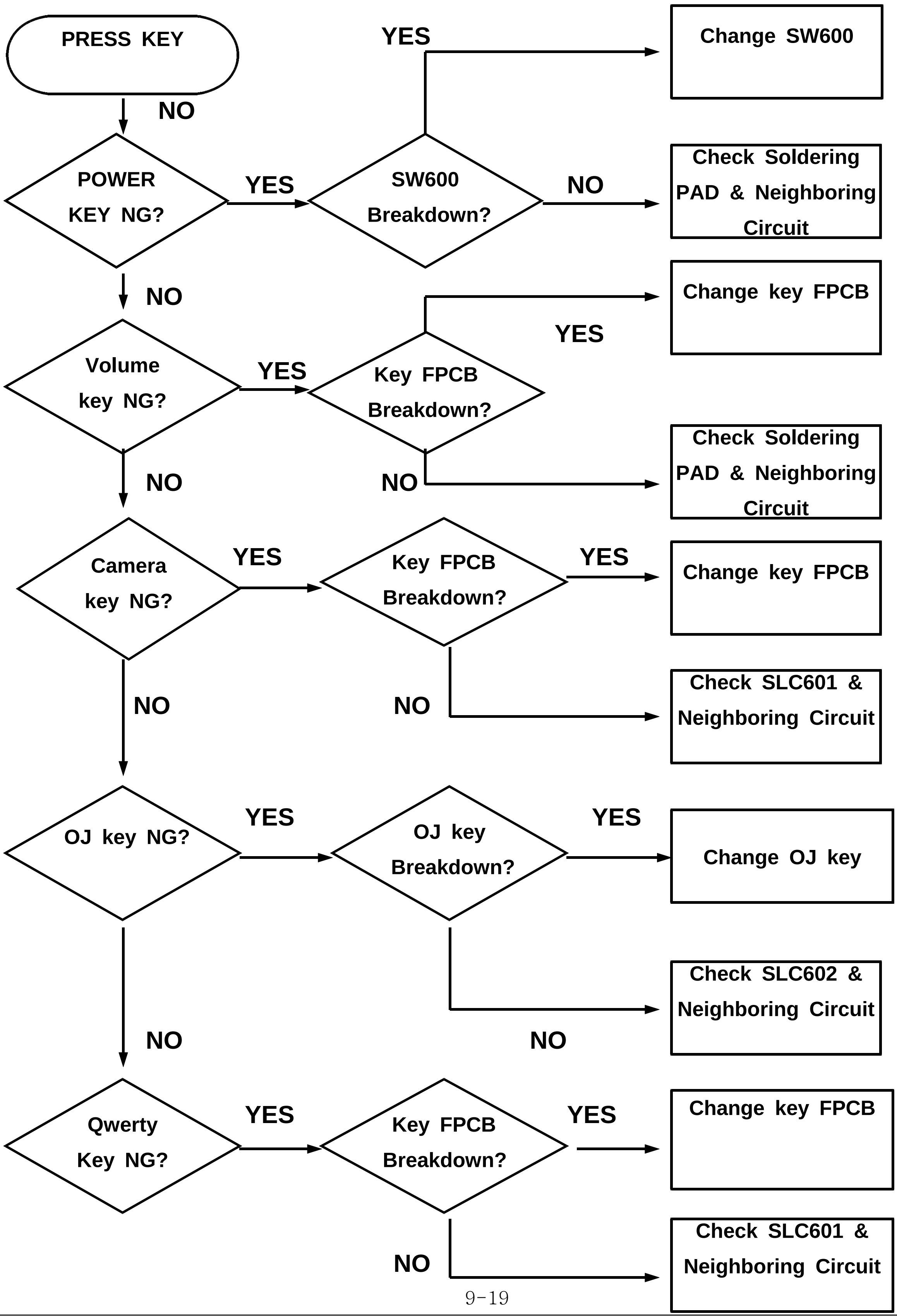
9-4. MIC Working

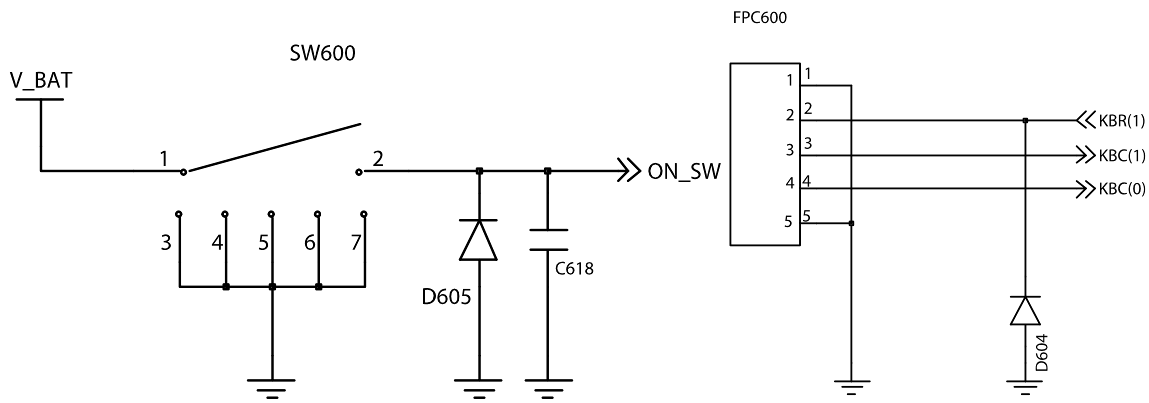


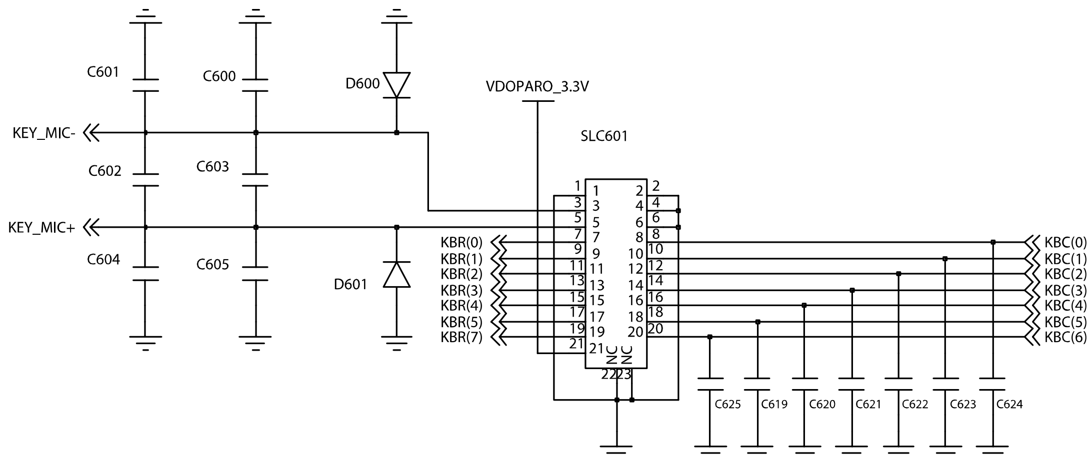

VUSB_5V
VUSB_CHG_5V
R520
U519
R519
R500
USB_DETECT
R503
C565
JTAG_JIG_ON
U500
VCC_3.0V
nRESET_OUT
JIG_ON
C501
CABLE_DETECT
R501
U502
C502
MSM_TXD
PDA_TXD
MSM_RXD
PDA_RXD
TX
UART_SEL
RX
IFC500
V_BAT
VTA_5V
C504
D-
D+
JIG_ON
R506
R507
R509
RXD
TXD
R510
R511
nJACK_INT
SEND_END
C510
C505
C511
C506
HPOUT_L
HPOUT_COM
HPOUT_R
C512
C513
C515
C514
EAR_MIC-
C516
C517
EAR_MIC+
C518
C520
ZD501
ZD502
ZD503
ZD504
ZD505
ZD506
VBAT
U505
R518
ULPI_EN
VCC_1.8V_USB
VCC_3.3V_USB
C521
C522
C523
C601
C600
D600
VDOPARO_3.3V
KEY_MIC-
SLC601
C602
C603
KEY_MIC+
C604
C605
D601
KBR(0)
KBR(1)
KBR(2)
KBR(3)
KBR(4)
KBR(5)
KBR(7)
KBC(0)
KBC(1)
KBC(2)
KBC(3)
KBC(4)
KBC(5)
KBC(6)
C625
C619
C620
C621
C622
C623
C624

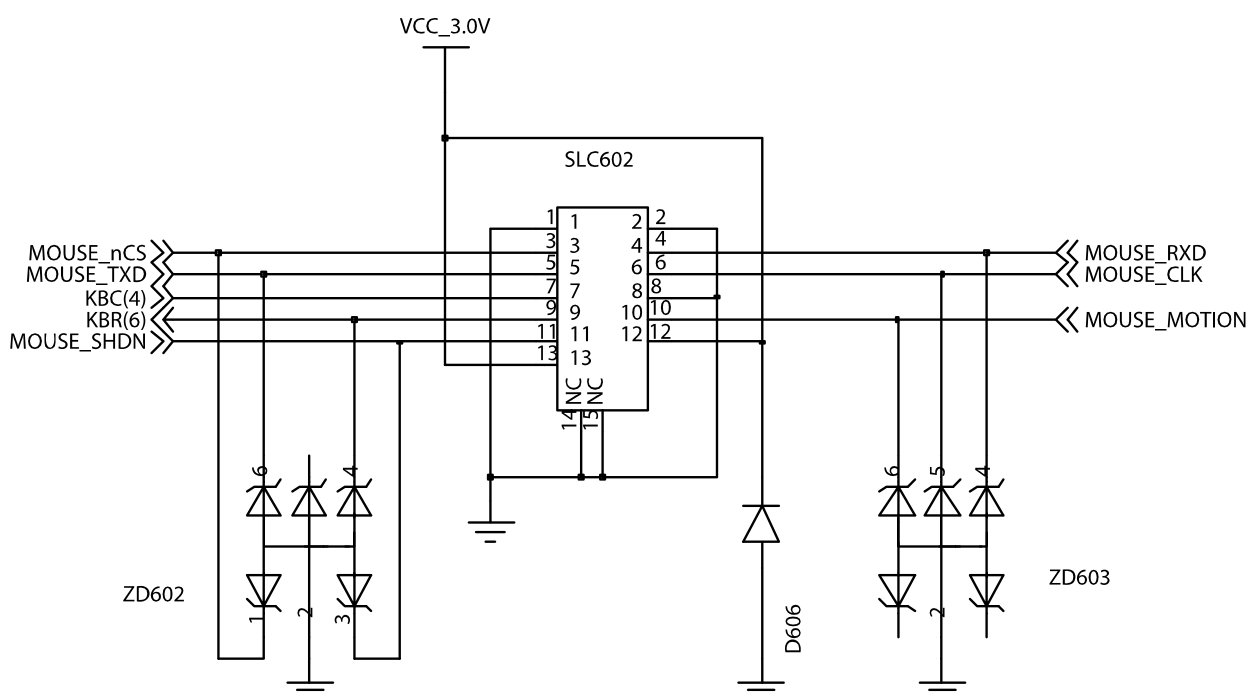


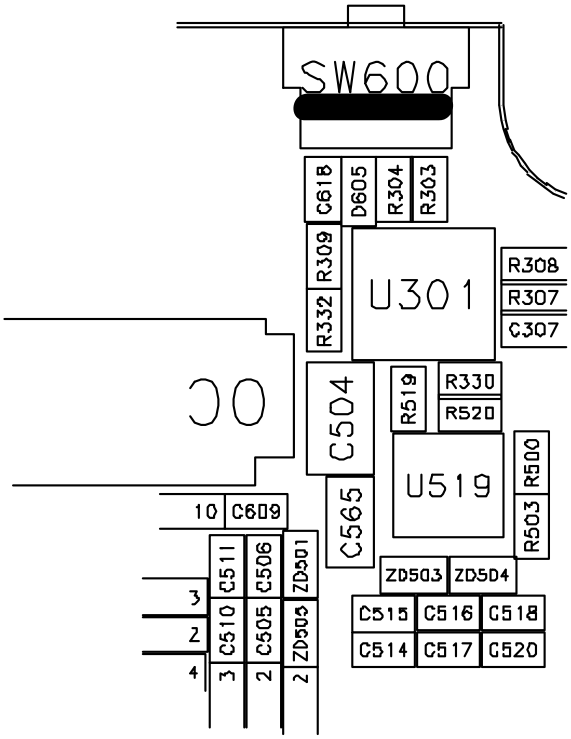
9-5. KEY Working

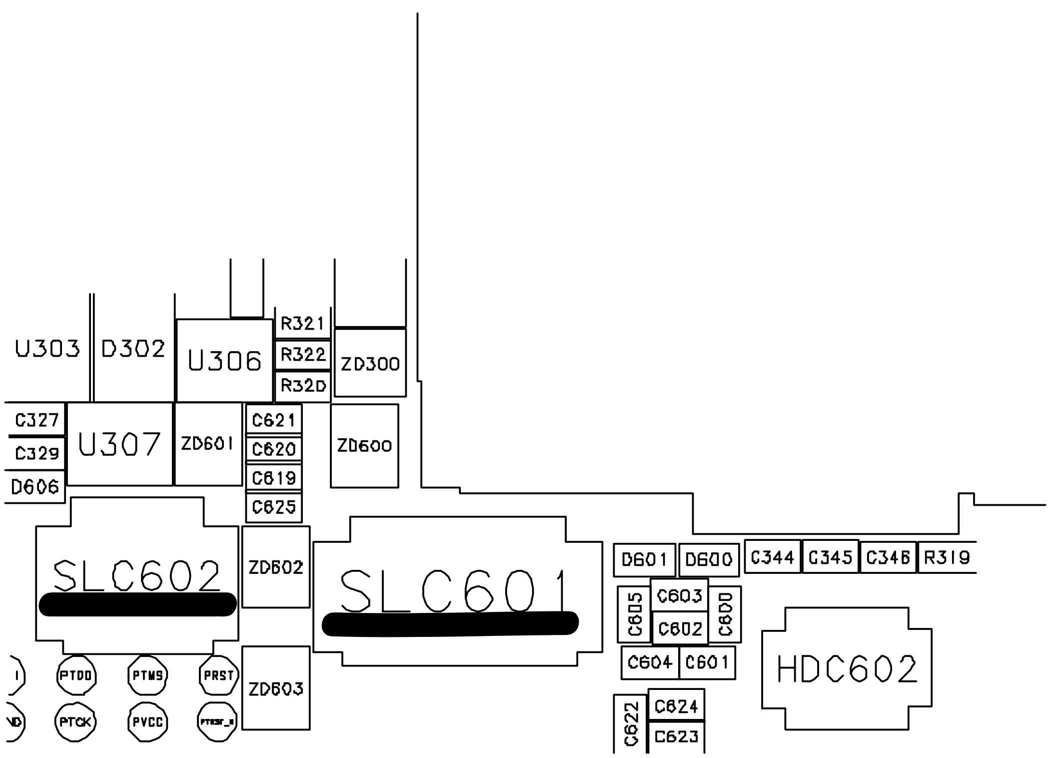



FPC600
SW600
V_BAT
ON_SW
KBR(1)
KBC(1)
KBC(0)
D605
C618
D604

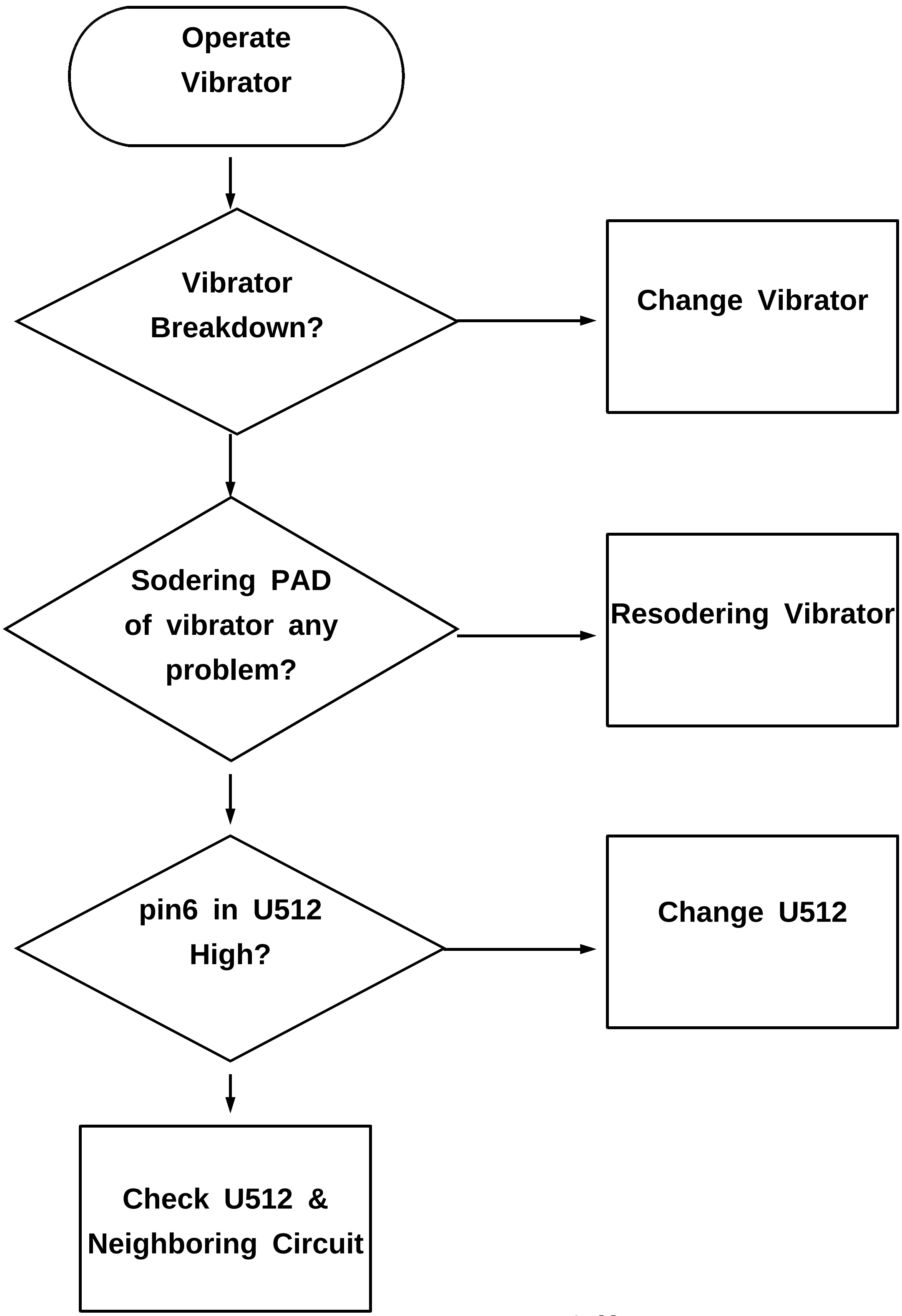

C601
C600
D600
VDOPARO_3.3V
SLC601
KEY_MIC-
C602
C603
KEY_MIC+
C604
C605
D601
KBR(0)
KBR(1)
KBR(2)
KBR(3)
KBR(4)
KBR(5)
KBR(7)
KBC(0)
KBC(1)
KBC(2)
KBC(3)
KBC(4)
KBC(5)
KBC(6)
C625
C619
C620
C621
C622
C623
C624

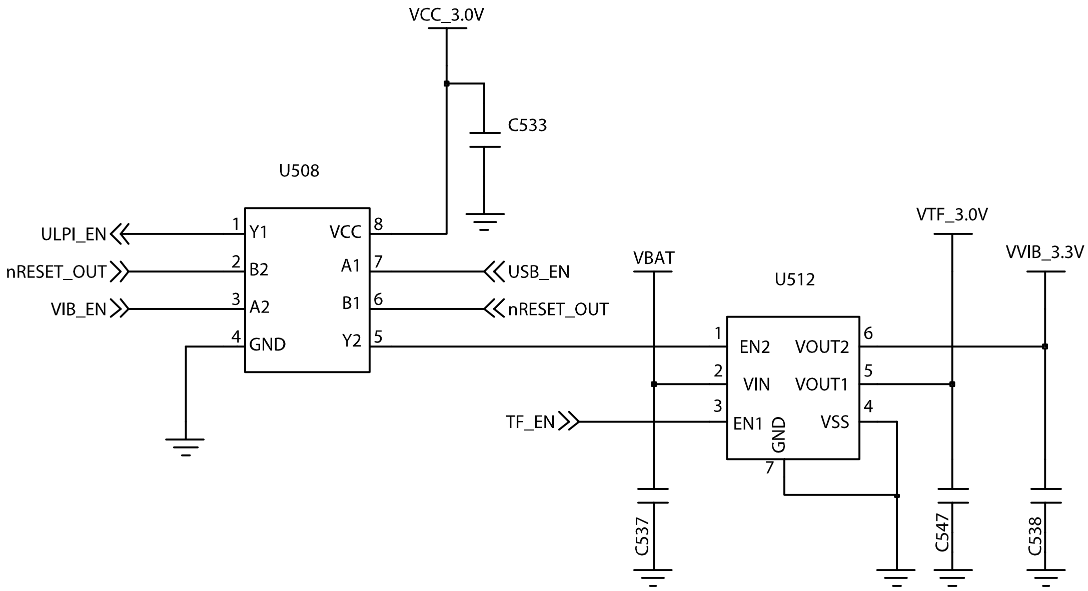

VCC_3.0V
SLC602
MOUSE_nCS
MOUSE_TXD
KBC(4)
KBR(6)
MOUSE_SHDN
MOUSE_RXD
MOUSE_CLK
MOUSE_MOTION
ZD602
D606
ZD603

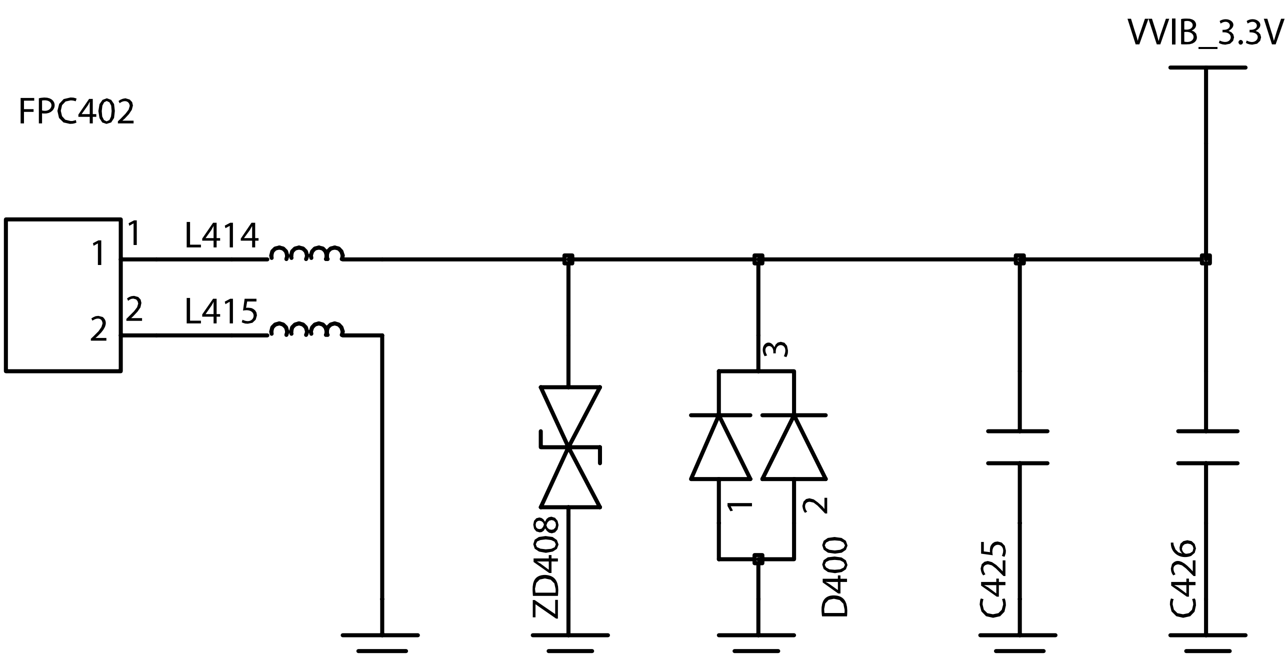

SW600
C618
D605
R304
R303
R309
U301
R308
R307
C307
R332
C504
R519
R330
R520
U519
R500
R503
C565
10
C609
C511
C506
ZD501
ZD503
ZD504
C515
C516
C518
C514
C517
C520
C510
C505
ZD505


U303
D302
U306
R321
R322
R320
ZD300
C327
C329
D606
U307
ZD601
C621
C620
C619
C625
ZD600
SLC602
ZD602
SLC601
D601
D600
C344
C345
C346
R319
C605
C603
C602
C600
C604
C601
HDC602
PTDO
PTMS
PRST
PTCK
PVCC
ZD603
C622
C624
C623

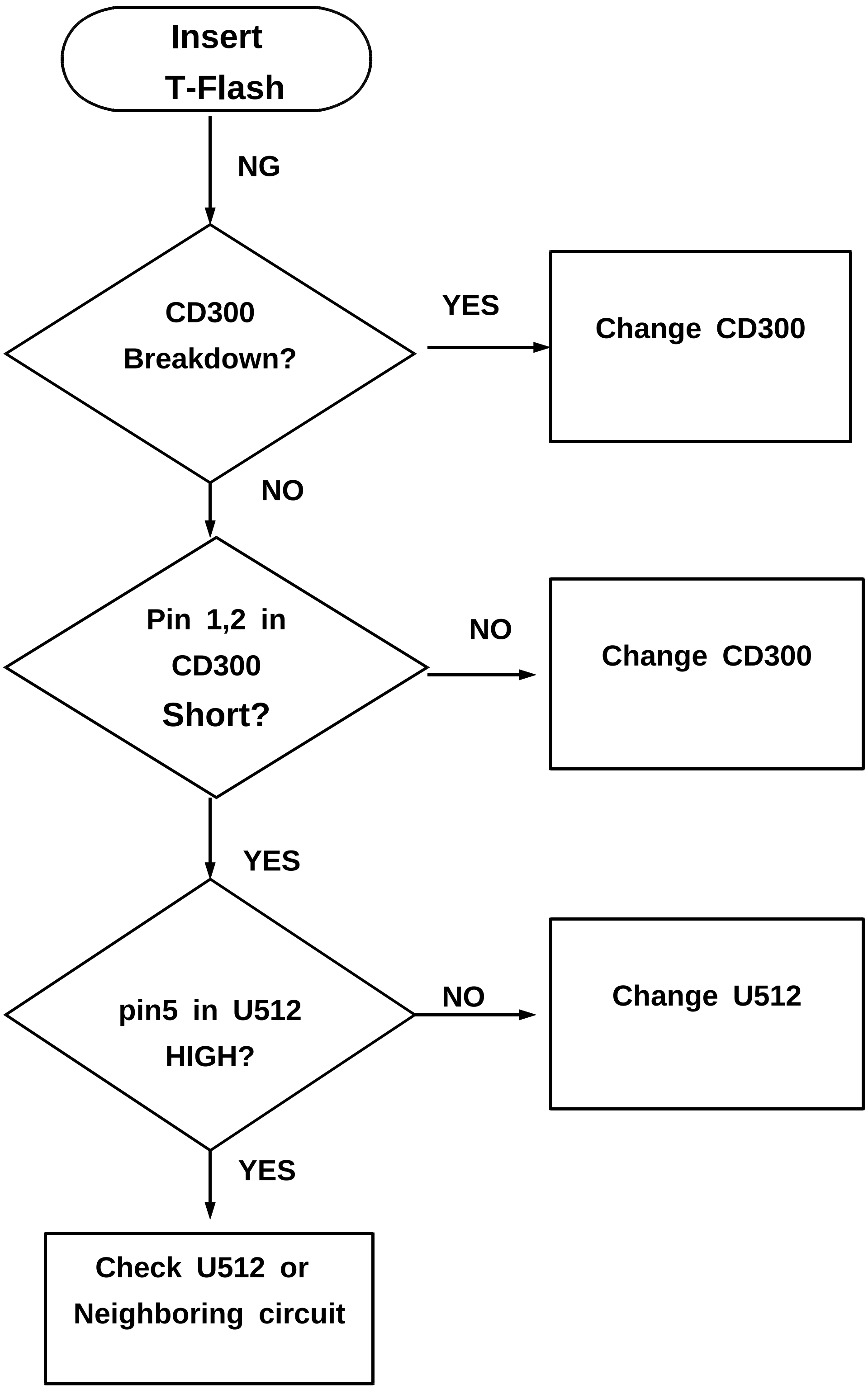
9-6. Vibrator Working

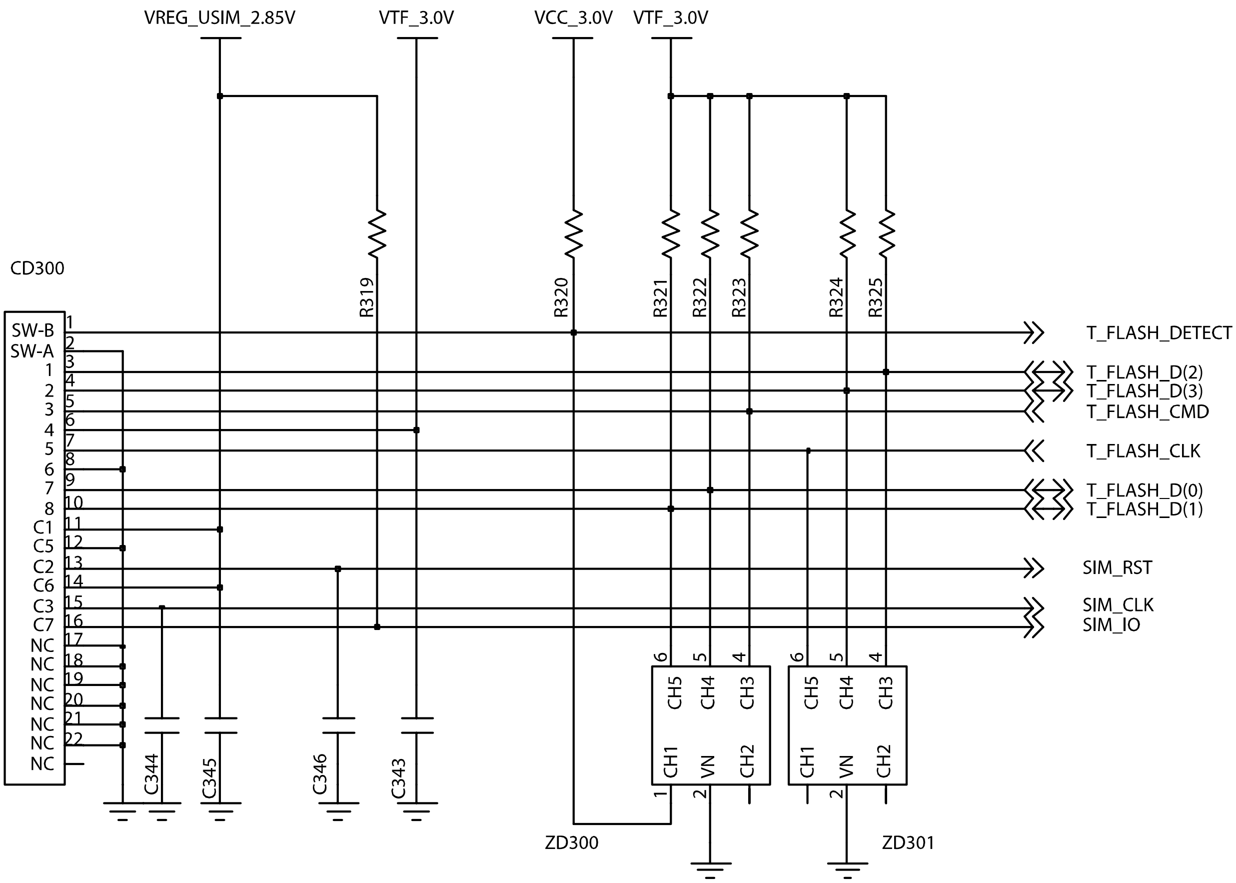


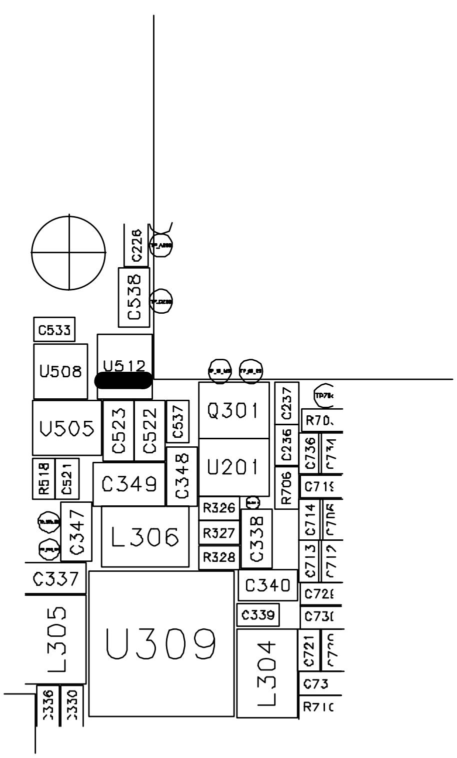

VCC_3.0V
C533
U508
ULPI_EN
nRESET_OUT
VIB_EN
Y1
B2
A2
GND
VCC
A1
B1
Y2
USB_EN
nRESET_OUT
VBAT
U512
VTF_3.0V
VVIB_3.3V
EN2
VIN
EN1
GND
VOUT2
VOUT1
VSS
TF_EN
C537
C547
C538


VVIB_3.3V
FPC402
L414
L415
ZD408
D400
C425
C426

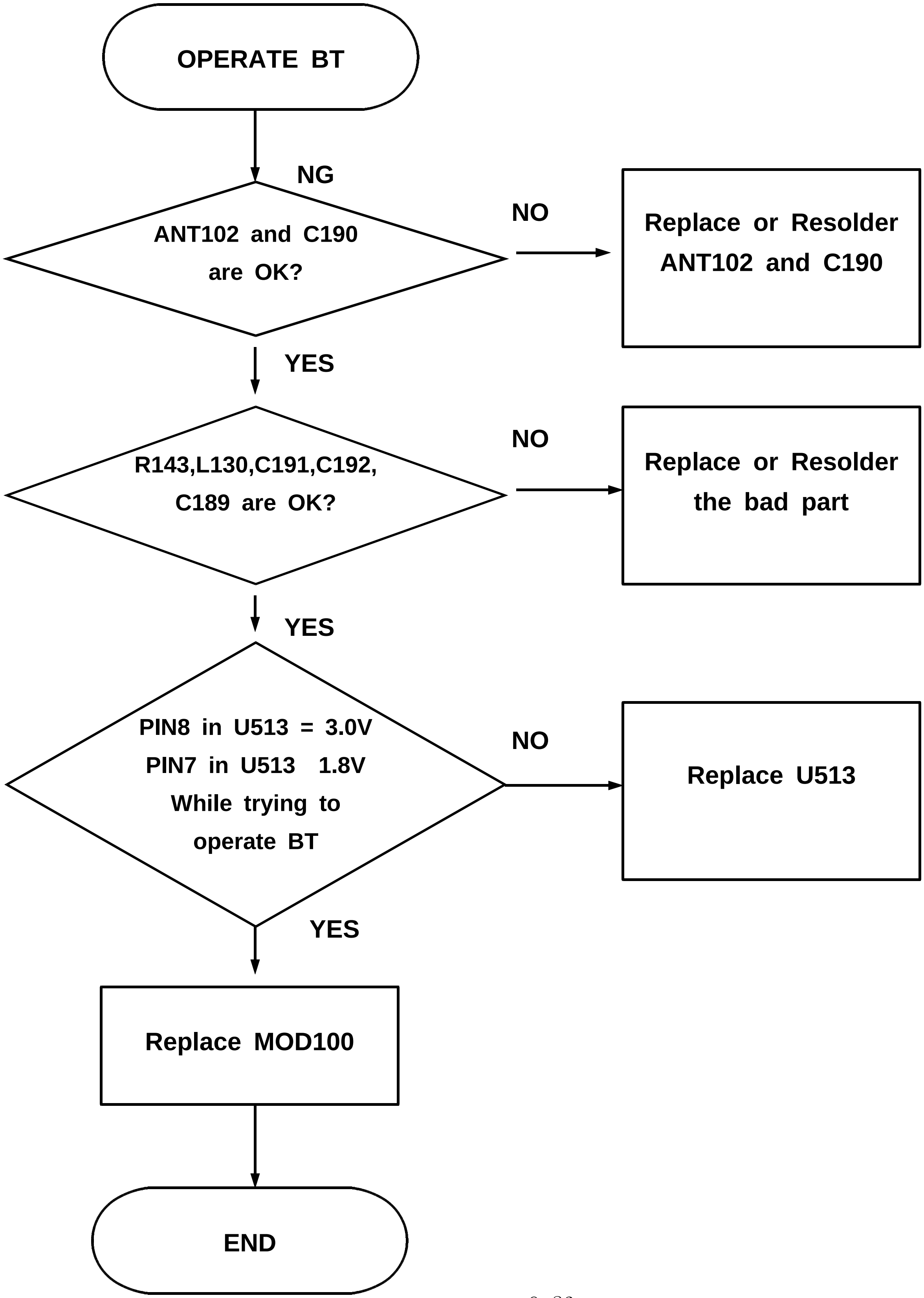
9-7. T-Flash Card Working

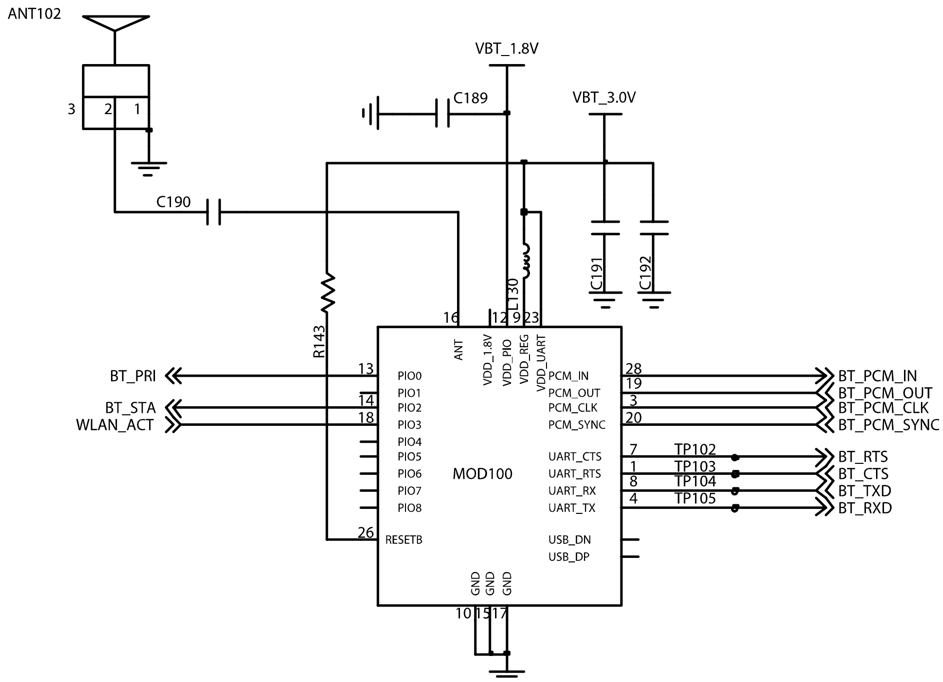


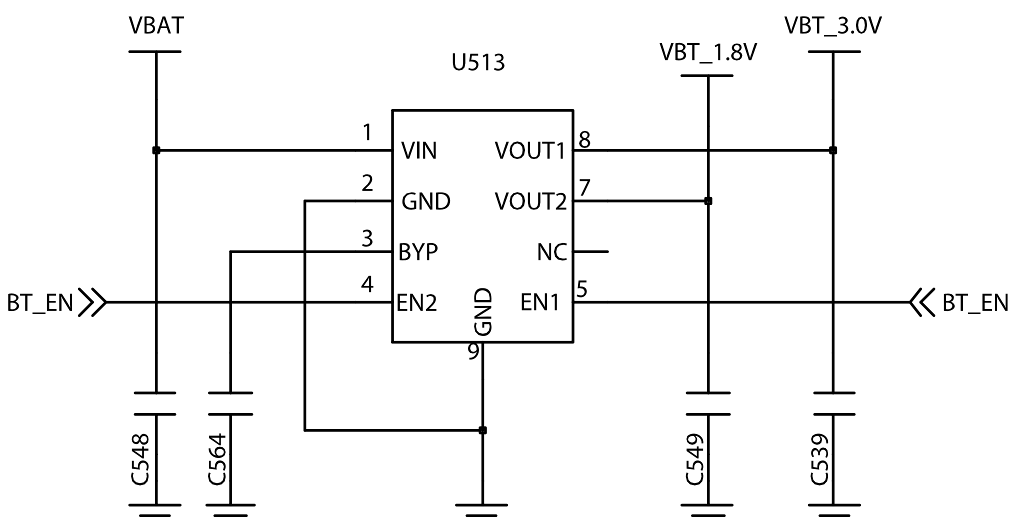

VREG_USIM_2.85V
VTF_3.0V
VCC_3.0V
VTF_3.0V
CD300
R319
R320
R321
R322
R323
R324
R325
SW-B
SW-A
T_FLASH_DETECT
T_FLASH_D(2)
T_FLASH_D(3)
T_FLASH_CMD
T_FLASH_CLK
T_FLASH_D(0)
T_FLASH_D(1)
SIM_RST
SIM_CLK
SIM_IO
C1
C5
C2
C6
C3
C7
NC
C344
C345
C346
C343
CH5
CH4
CH3
CH1
VN
CH2
ZD300
ZD301

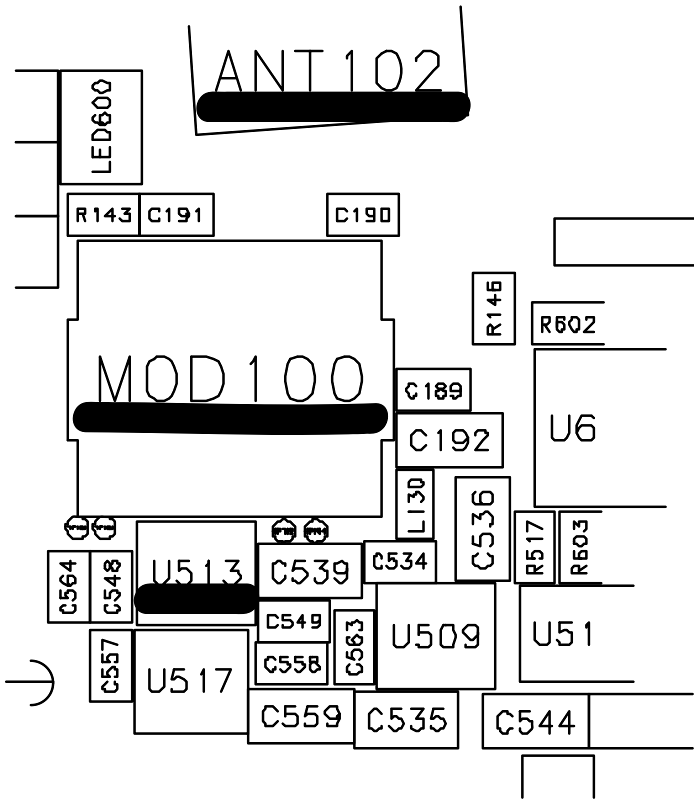

C226
C538
C533
U508
U512
U505
C523
C522
C537
Q301
C237
U201
C236
R518
C521
C349
C348
R706
L306
R326
R327
R328
C338
C347
C337
C340
C339
L305
U309
L304

9-8. Bluetooth Working

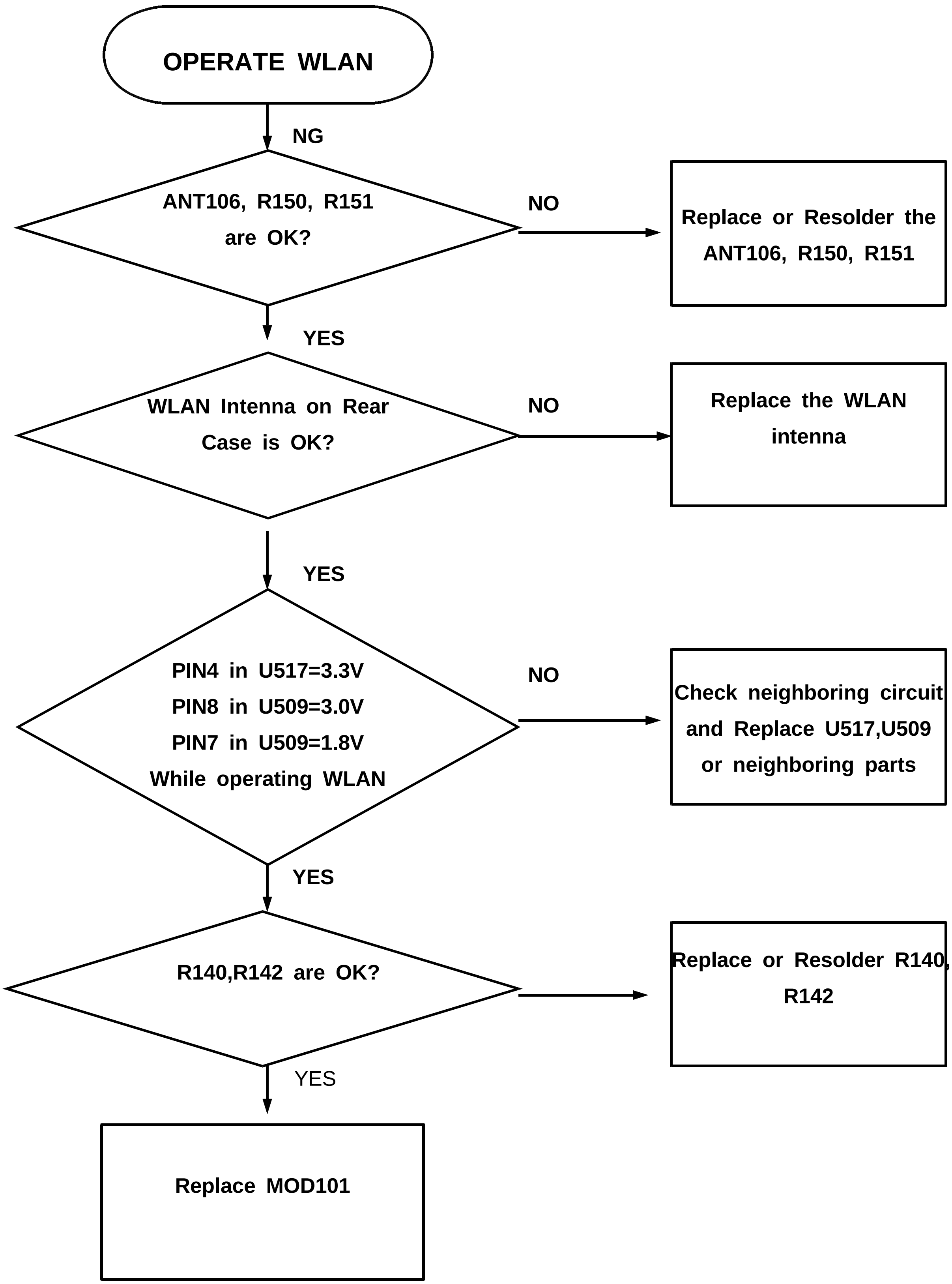


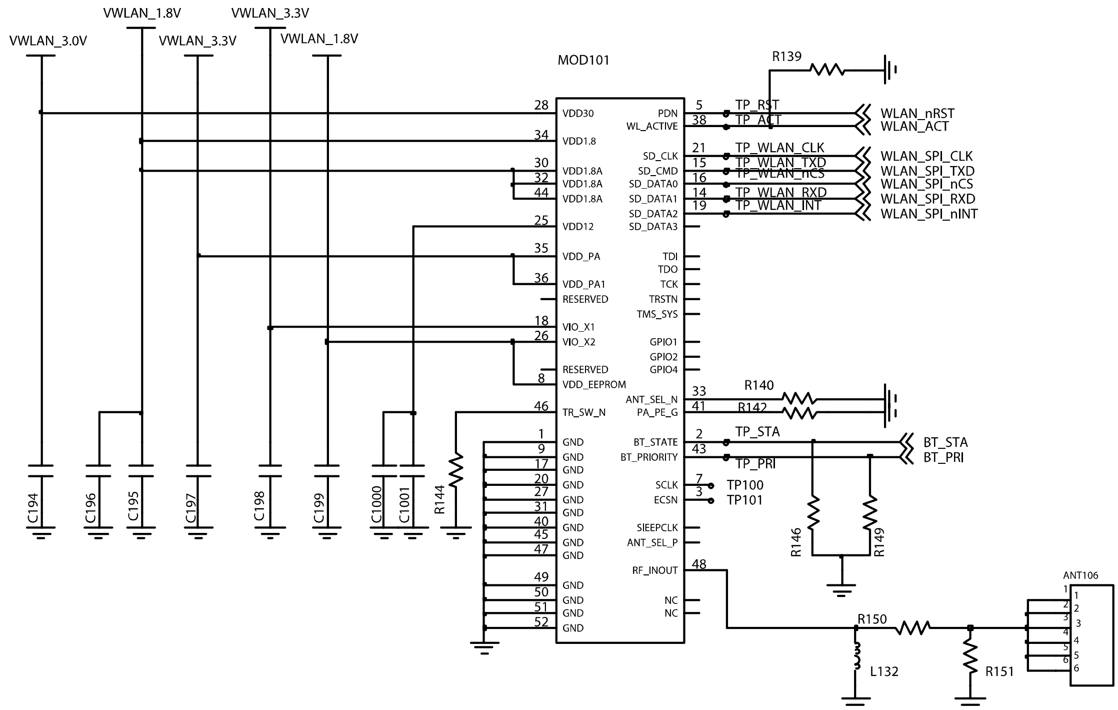

ANT102
VBT_1.8V
C189
VBT_3.0V
C190
C191
C192
L130
R143
MOD100
BT_PRI
BT_STA
WLAN_ACT
BT_PCM_IN
BT_PCM_OUT
BT_PCM_CLK
BT_PCM_SYNC
TP102
TP103
TP104
TP105
BT_RTS
BT_CTS
BT_TXD
BT_RXD

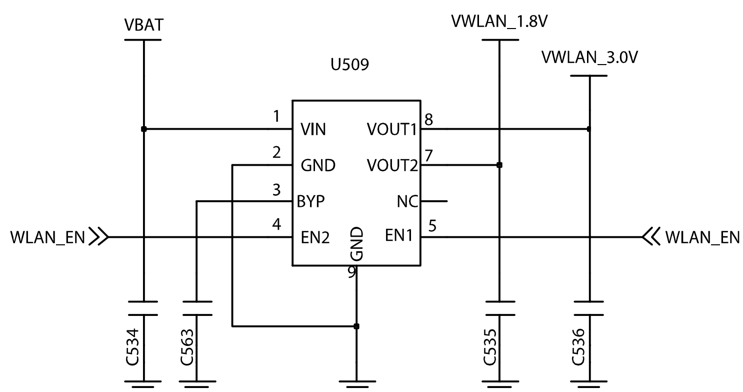

VBAT
U513
VBT_1.8V
VBT_3.0V
VIN
GND
BYP
EN2
VOUT1
VOUT2
NC
EN1
BT_EN
BT_EN
C548
C564
C549
C539

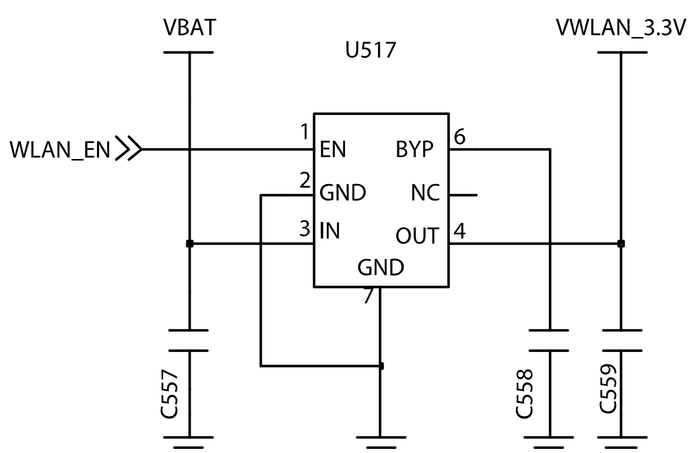

ANT102
LED600
R143
C191
C190
R146
R602
MOD100
C189
C192
U6
L130
C536
R517
R603
U513
C539
C534
C564
C548
C549
C563
U509
U51
C557
U517
C558
C559
C535
C544

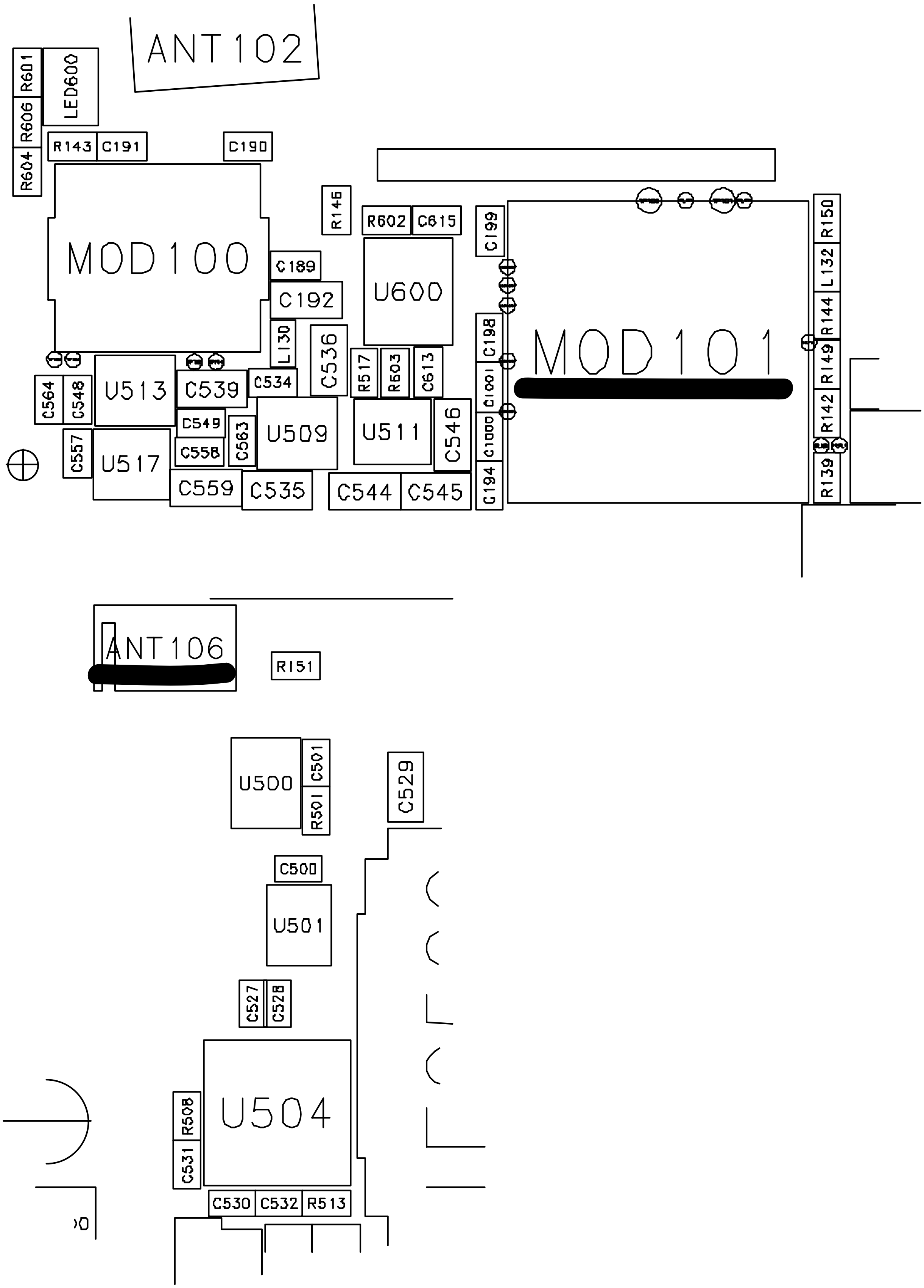
9-9. WLAN Working



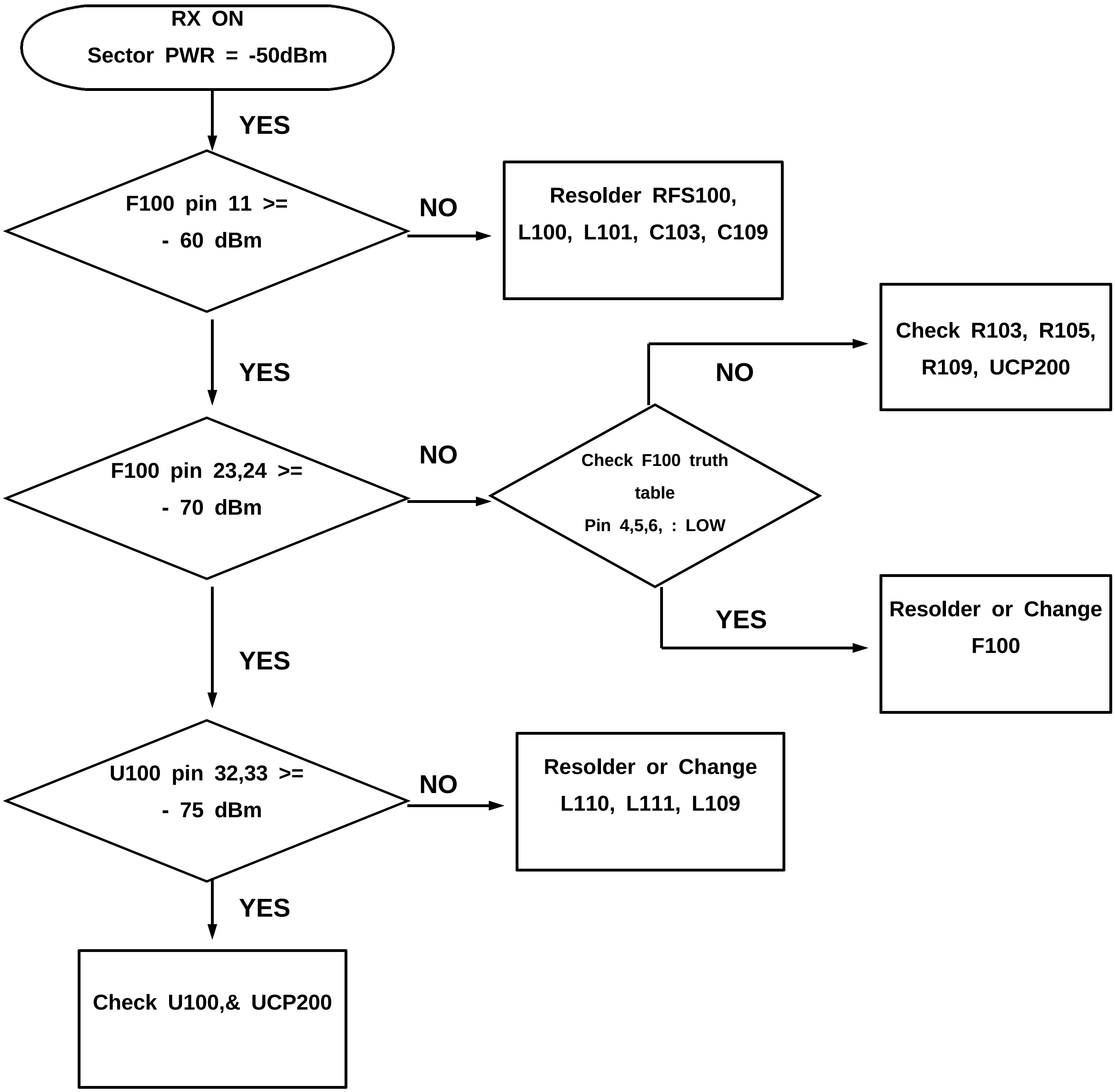

VWLAN_3.0V
VWLAN_1.8V
VWLAN_3.3V
VWLAN_3.3V
VWLAN_1.8V
MOD101
R139
VDD30
VDD1.8
VDD1.8A
VDD1.8A
VDD1.8A
VDD12
VDD_PA
VDD_PA1
RESERVED
VIO_X1
VIO_X2
RESERVED
VDD_EEPROM
TR_SW_N
GND
PDN
WL_ACTIVE
SD_CLK
SD_CMD
SD_DATA0
SD_DATA1
SD_DATA2
SD_DATA3
TDI
TDO
TCK
TRSTN
TMS_SYS
GPIO1
GPIO2
GPIO4
ANT_SEL_N
PA_PE_G
BT_STATE
BT_PRIORITY
SCLK
ECSN
SIEEPCLK
ANT_SEL_P
RF_INOUT
NC
TP_RST
TP_ACT
TP_WLAN_CLK
TP_WLAN_TXD
TP_WLAN_nCS
TP_WLAN_RXD
TP_WLAN_INT
WLAN_nRST
WLAN_ACT
WLAN_SPI_CLK
WLAN_SPI_TXD
WLAN_SPI_nCS
WLAN_SPI_RXD
WLAN_SPI_nINT
R140
R142
TP_STA
TP_PRI
BT_STA
BT_PRI
TP100
TP101
R146
R149
ANT106
R150
L132
R151
C194
C196
C195
C197
C198
C199
C1000
C1001
R144

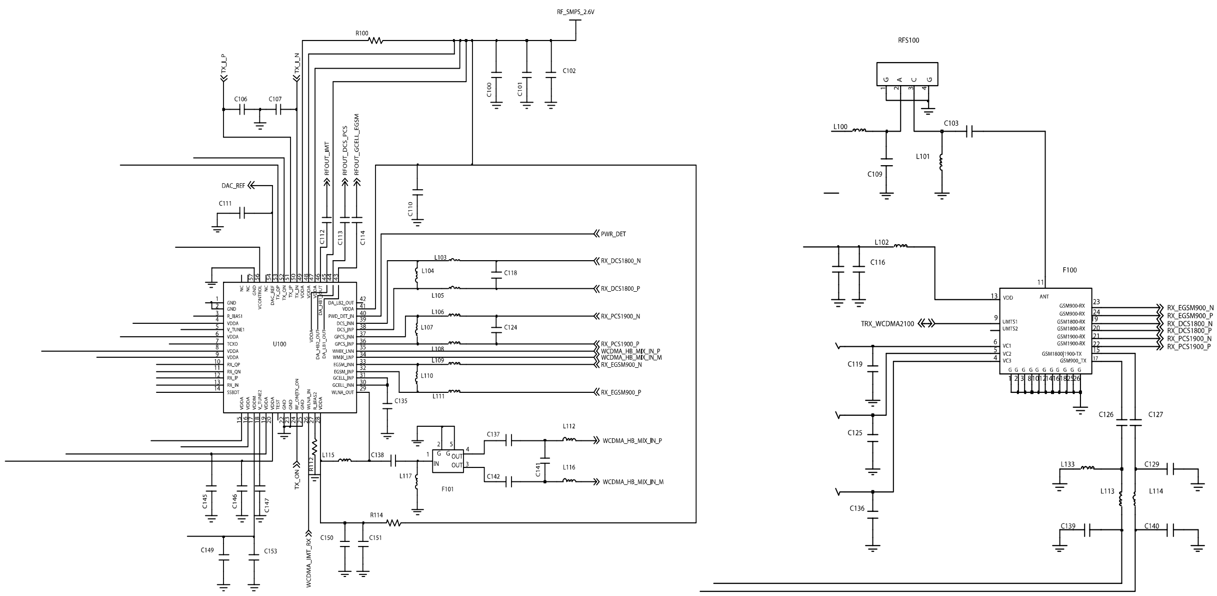

VBAT
VWLAN_1.8V
VWLAN_3.0V
U509
VIN
GND
BYP
EN2
VOUT1
VOUT2
NC
EN1
GND
WLAN_EN
WLAN_EN
C534
C563
C535
C536

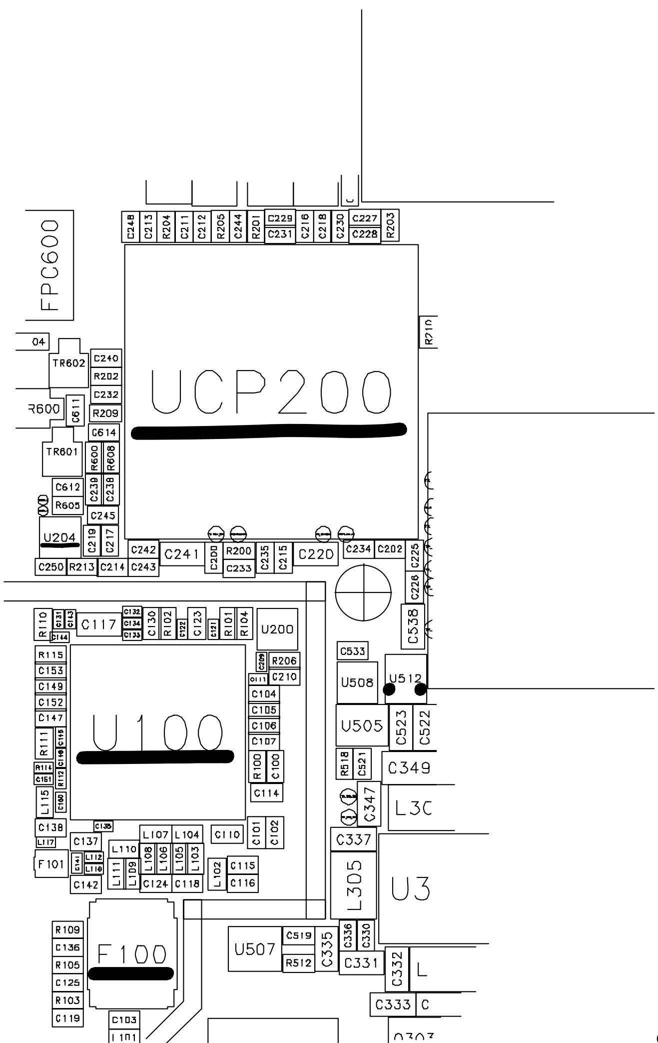

VBAT
U517
VWLAN_3.3V
WLAN_EN
EN
GND
IN
BYP
NC
OUT
GND
C557
C558
C559


ANT102
R601
R606
R604
LED600
R143
C191
C190
MOD100
R146
R602
C615
C199
R150
L132
R144
R149
R142
R139
C189
C192
U600
L130
C536
R517
R603
C613
C198
C1001
C1000
C194
MOD101
C564
C548
U513
C539
C534
C549
C558
C563
U509
U511
C546
C557
U517
C559
C535
C544
C545
ANT106
R151
U500
C501
R501
C529
C500
U501
C527
C528
U504
R508
C531
C530
C532
R513

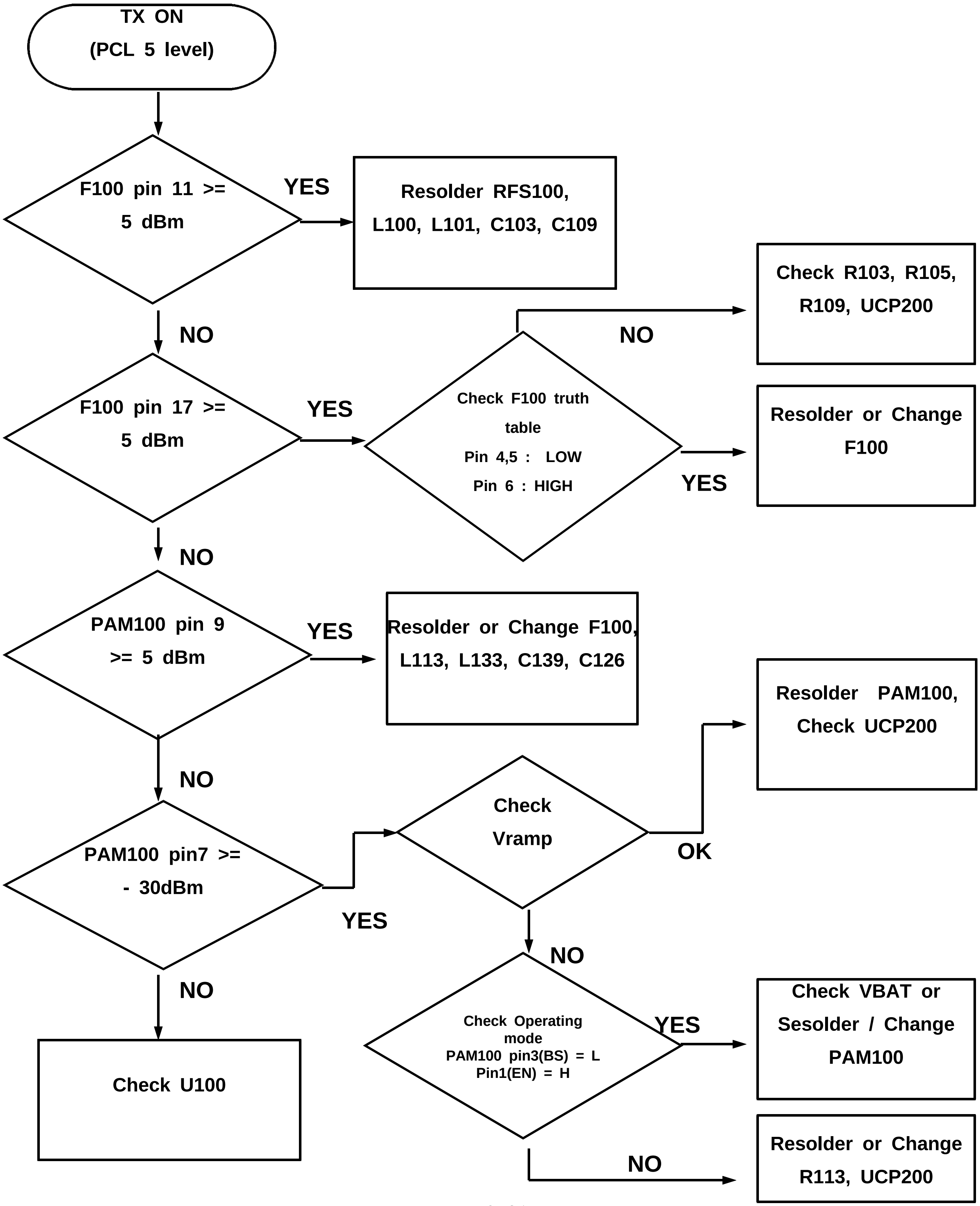
9-10. GSM Receiver

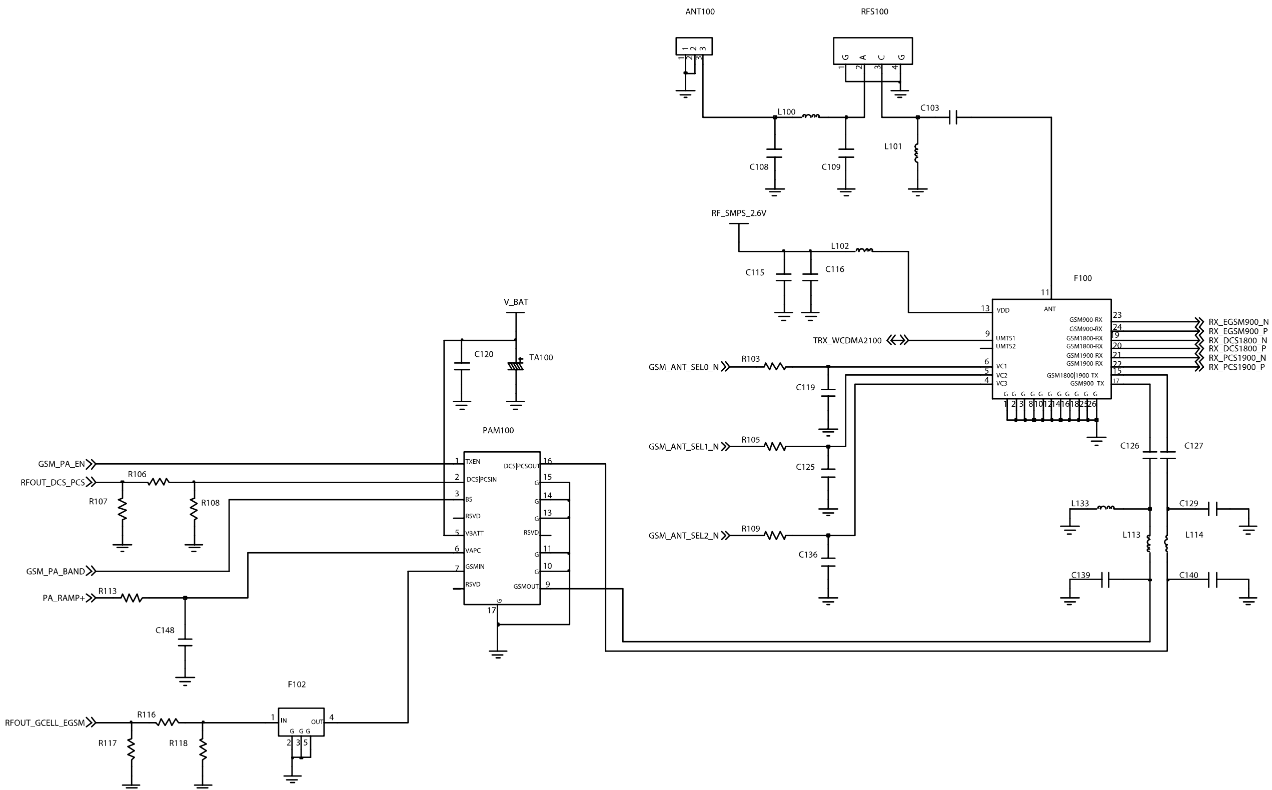


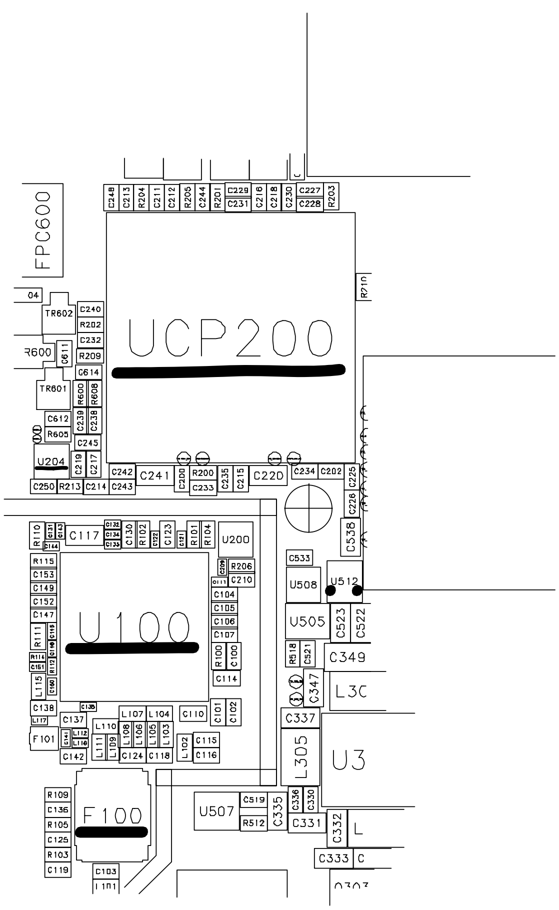


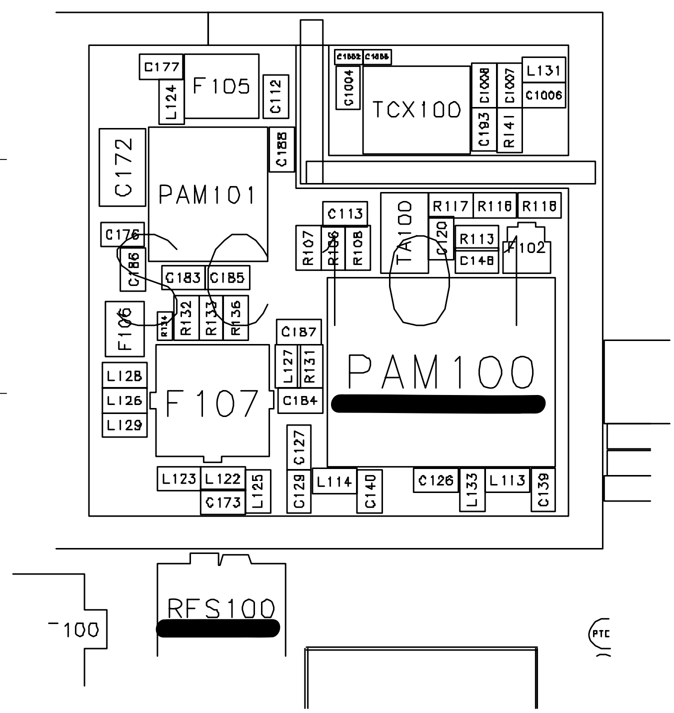

FPC600
UCP200
U100
F100

9-11. GSM Transmitter

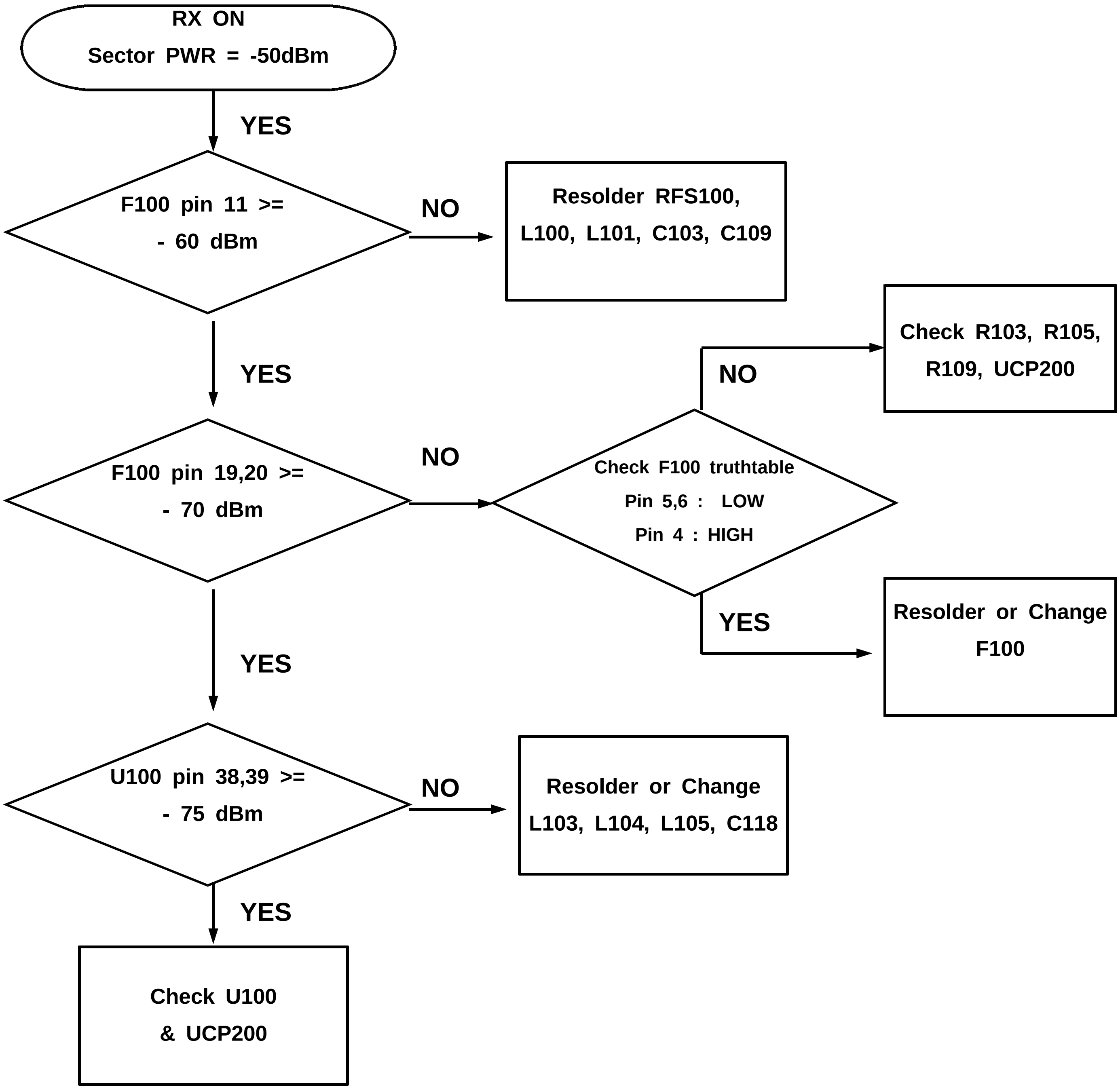


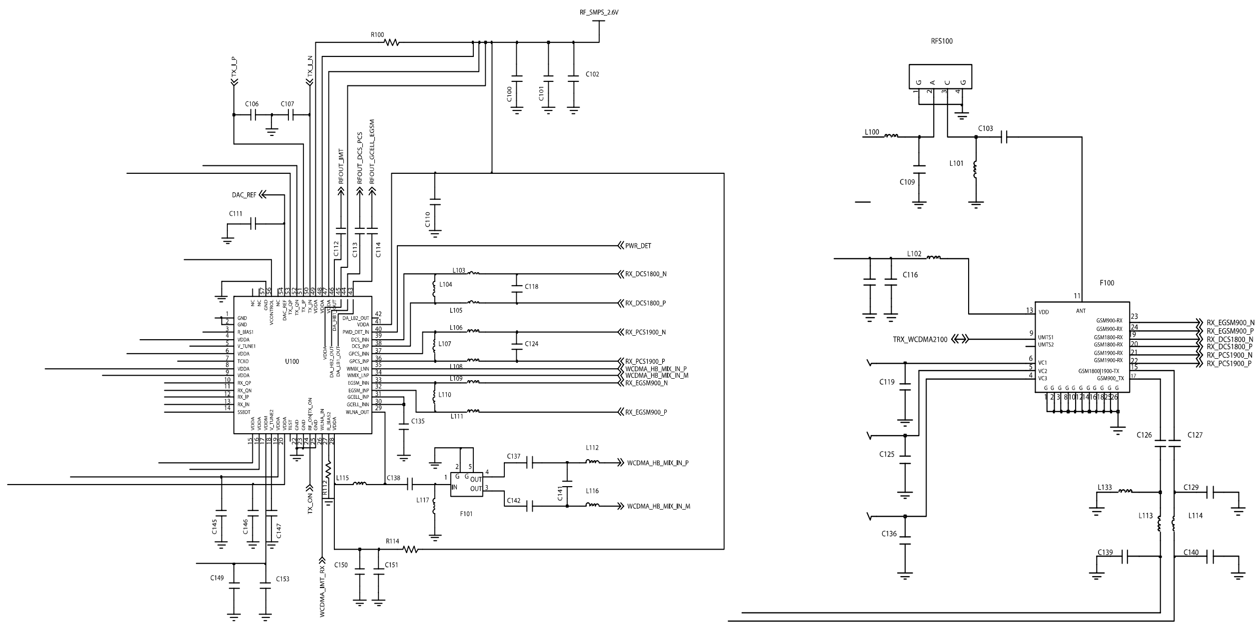

ANT100
RFS100
L100
C103
C108
C109
L101
RF_SMPS_2.6V
L102
C115
C116
F100
V_BAT
C120
TA100
TRX_WCDMA2100
GSM_ANT_SEL0_N
R103
C119
PAM100
GSM_ANT_SEL1_N
R105
C125
GSM_ANT_SEL2_N
R109
C136
GSM_PA_EN
RFOUT_DCS_PCS
R106
R107
R108
GSM_PA_BAND
PA_RAMP+
R113
C148
F102
RFOUT_GCELL_EGSM
R116
R117
R118
RX_EGSM900_N
RX_EGSM900_P
RX_DCS1800_N
RX_DCS1800_P
RX_PCS1900_N
RX_PCS1900_P
C126
C127
L133
C129
L113
L114
C139
C140

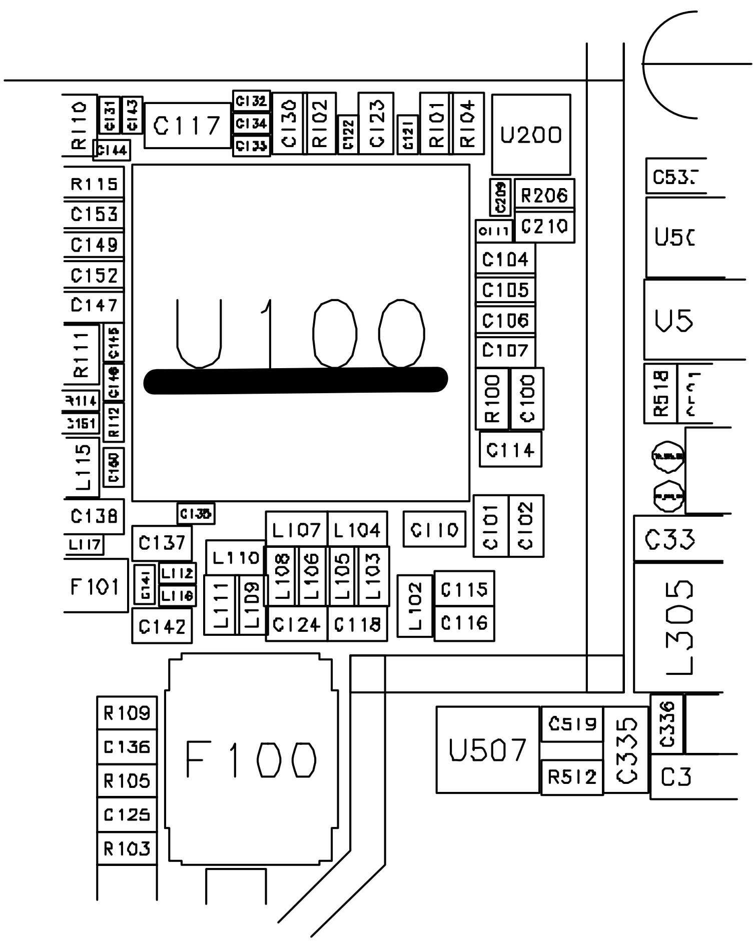

FPC600
UCP200
U100
F100
U200
U507
U505
U508
L305


F105
TCX100
C172
PAM101
F107
PAM100
F102
RFS100

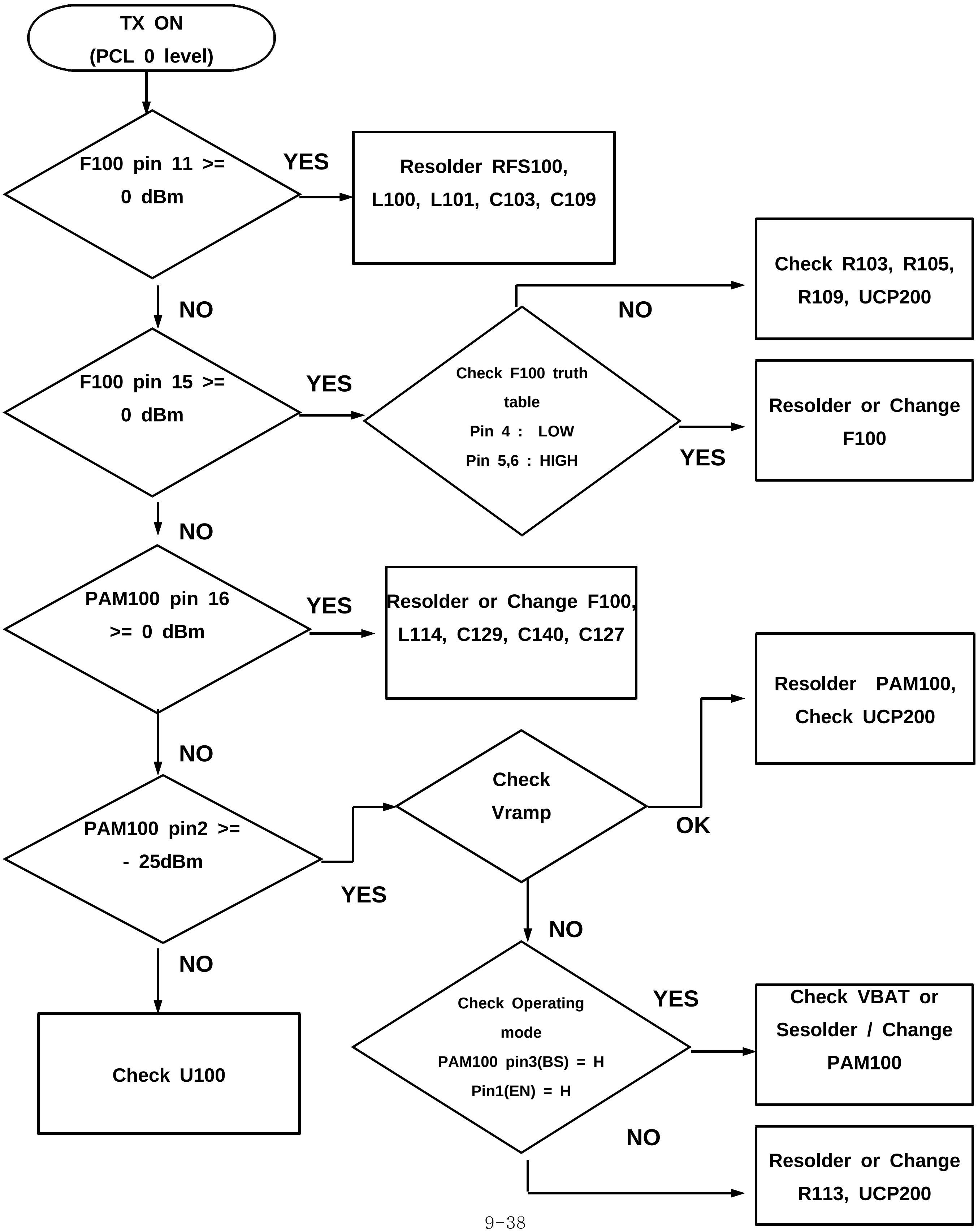
9-12. DCS Receiver

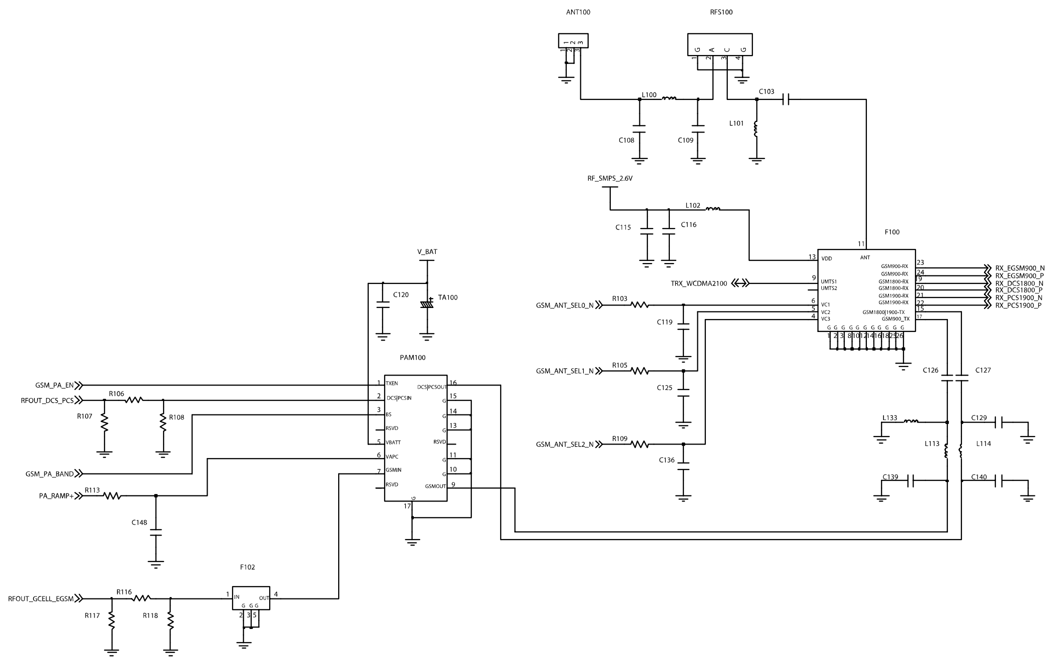


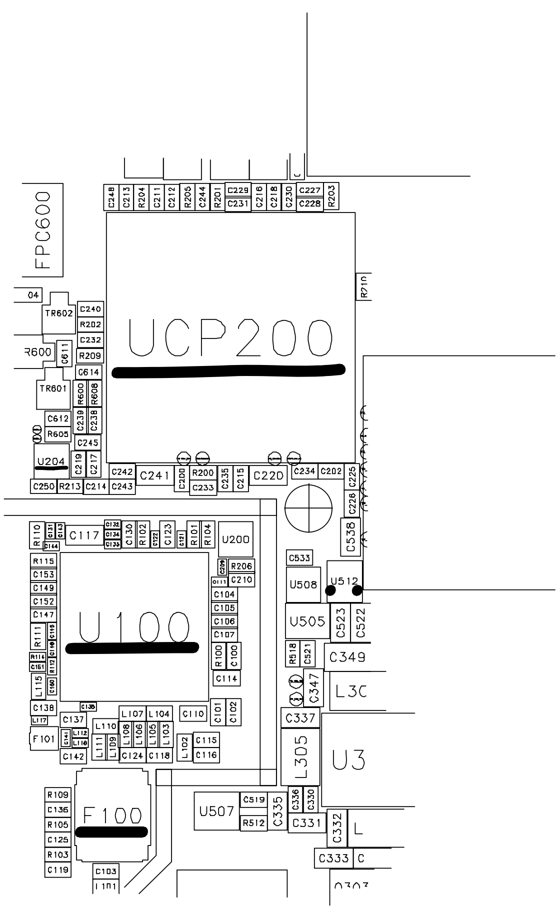


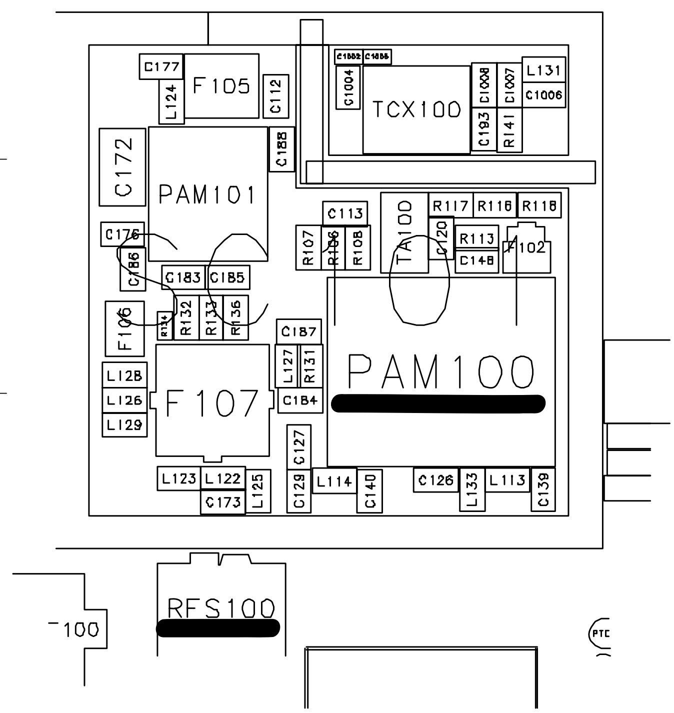


9-13. DCS Transmitter

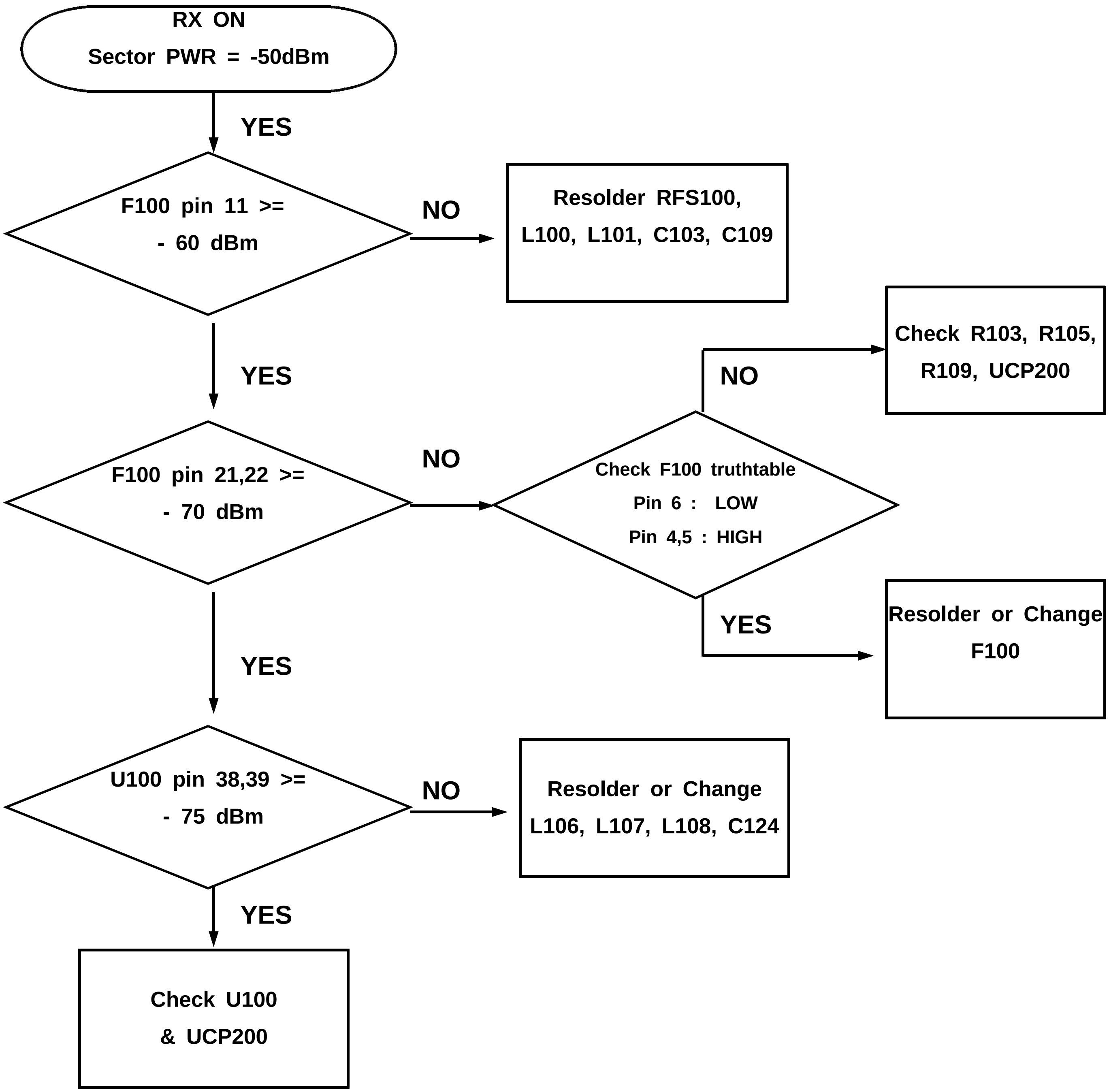


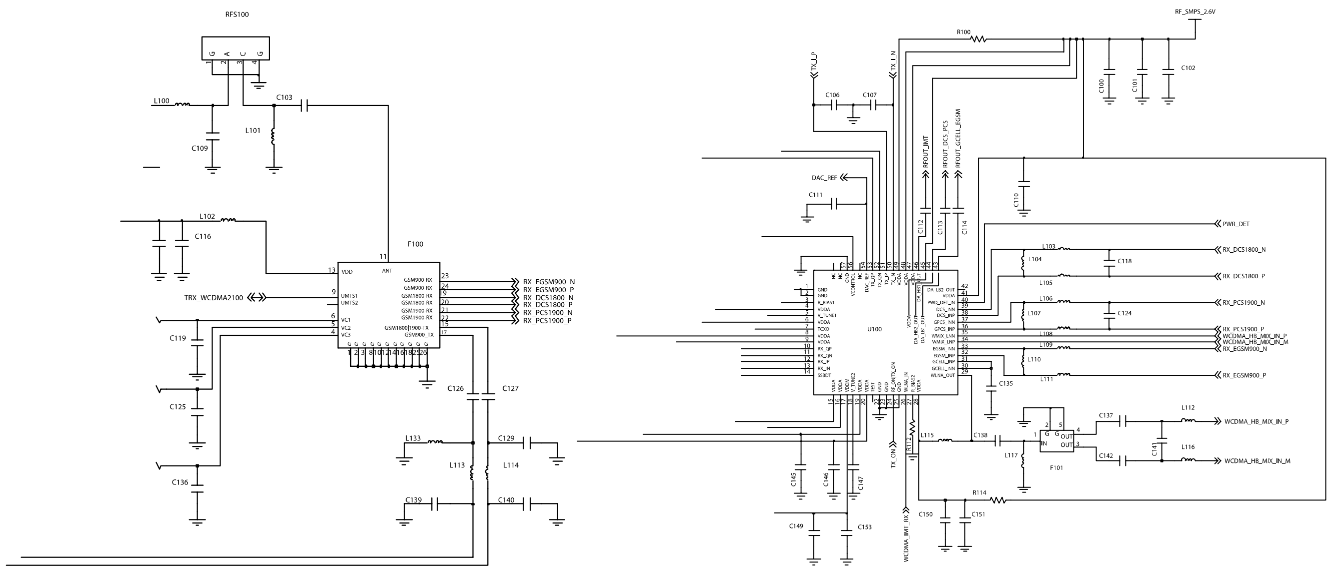


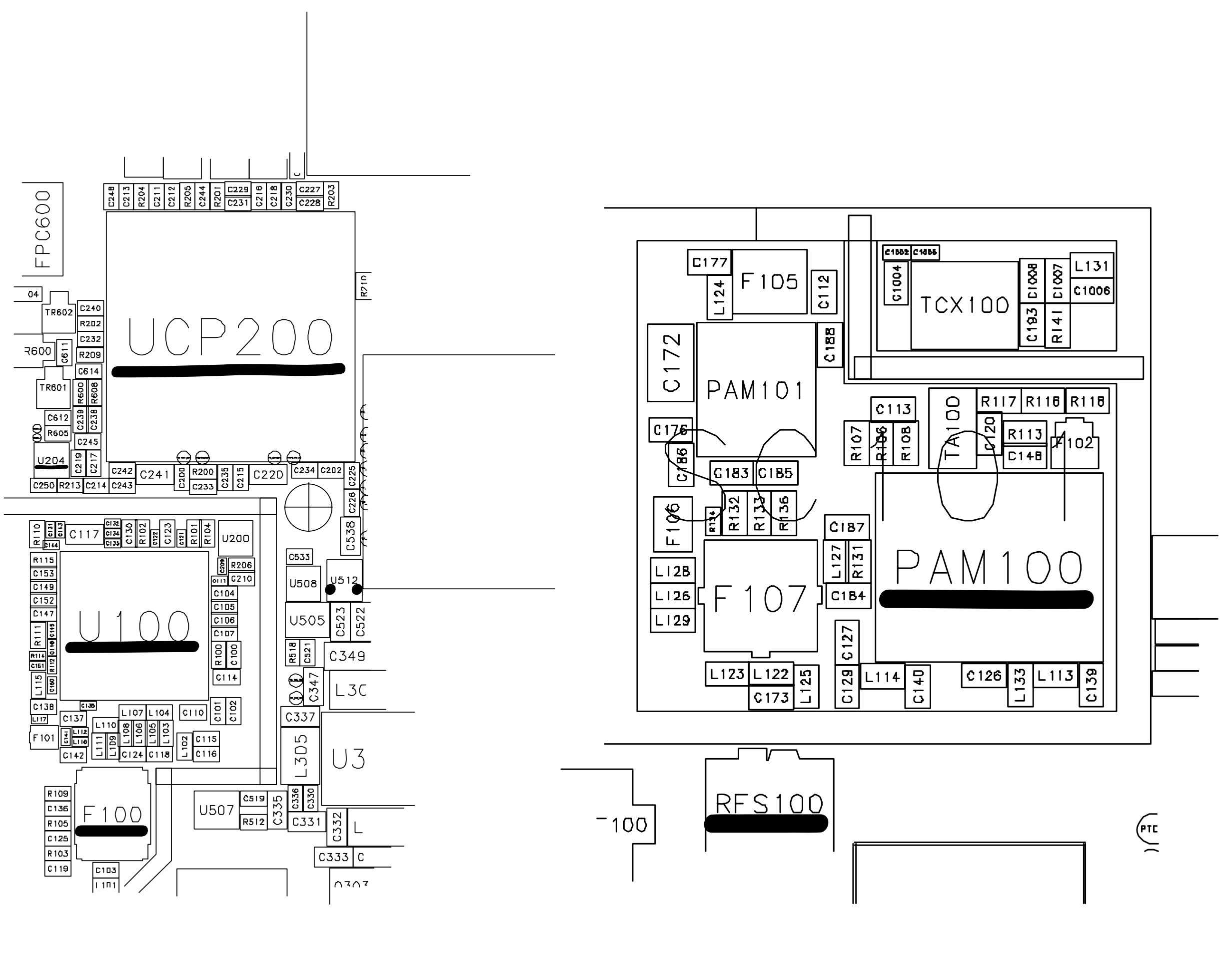

FPC600
UCP200
U100
F100
U508
U505
U507
L305
U3


F105
TCX100
C172
PAM101
TA100
F102
F106
F107
PAM100
RFS100

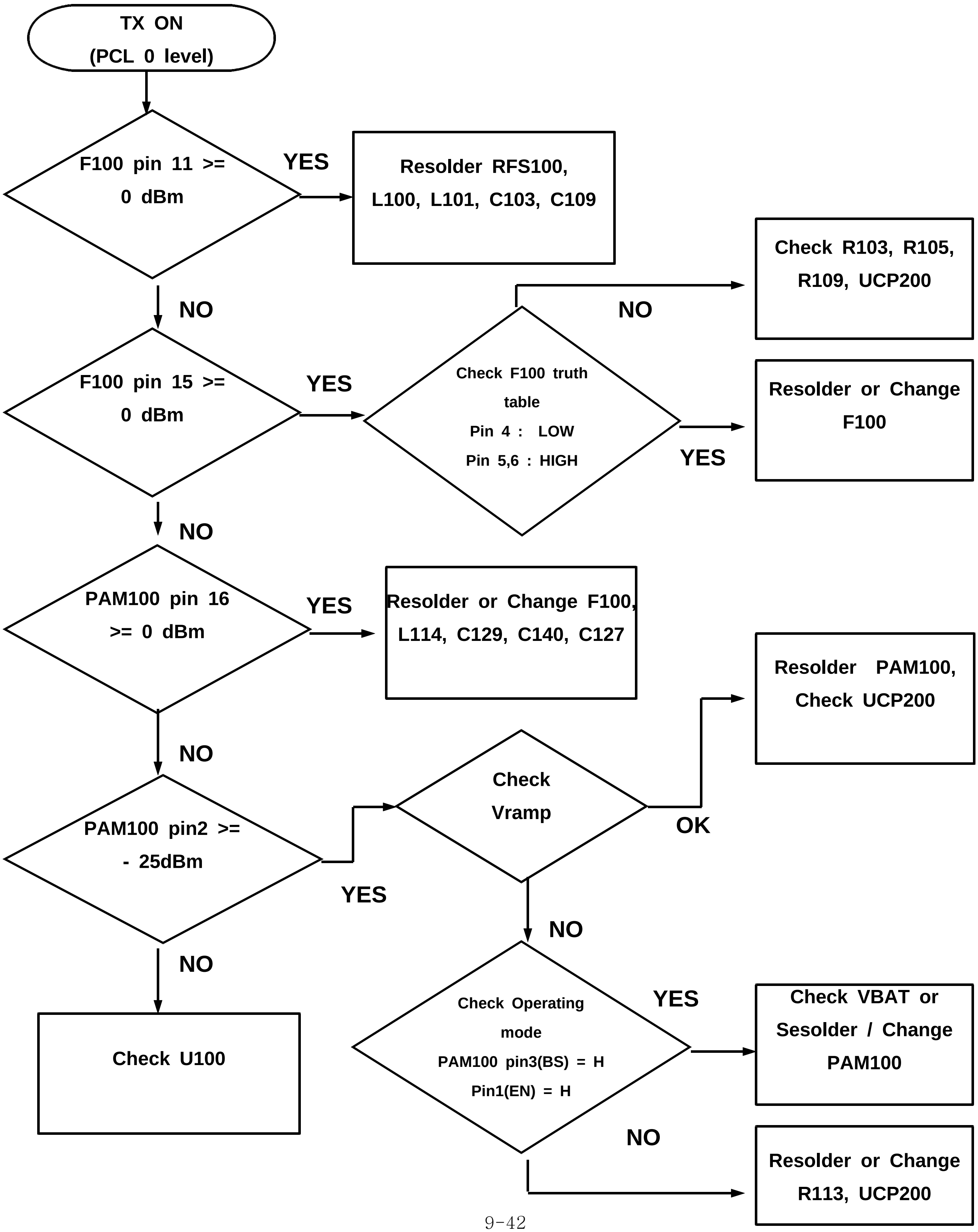
9-14. PCS Receiver

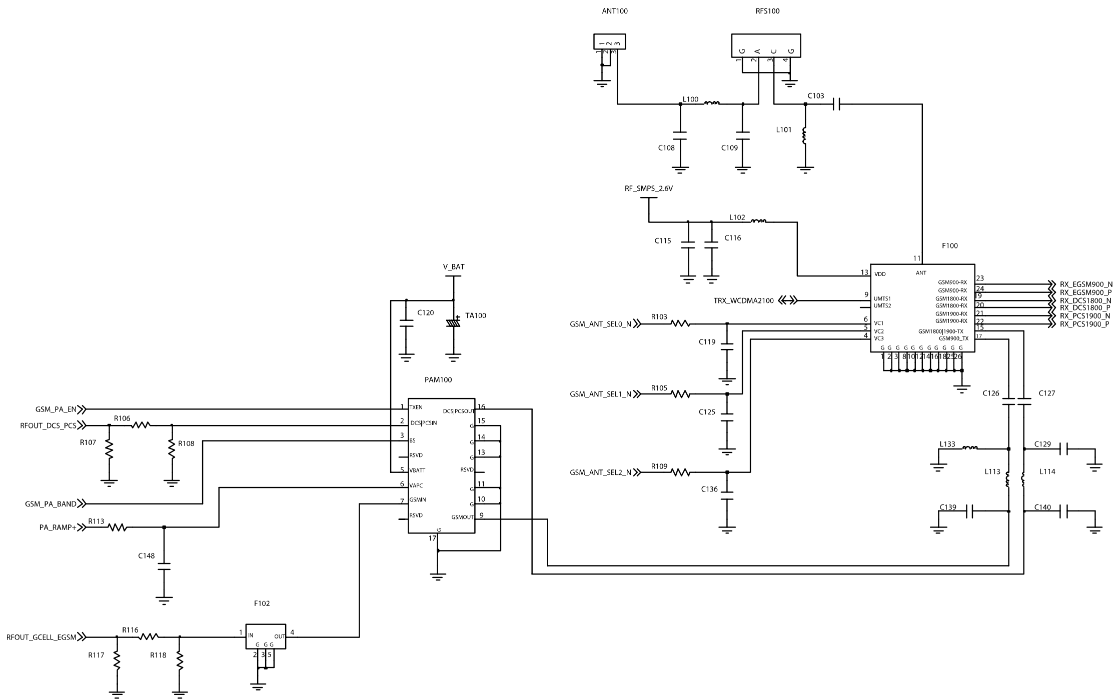


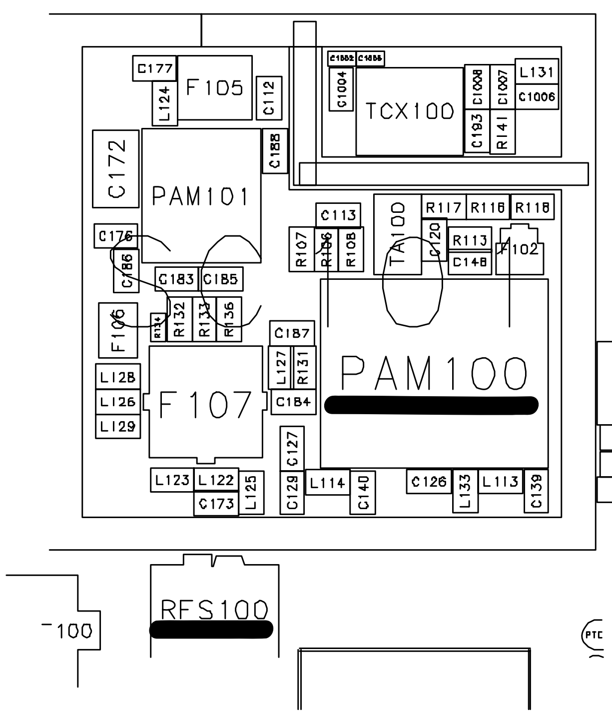

RFS100
F100
U100
TRX_WCDMA2100

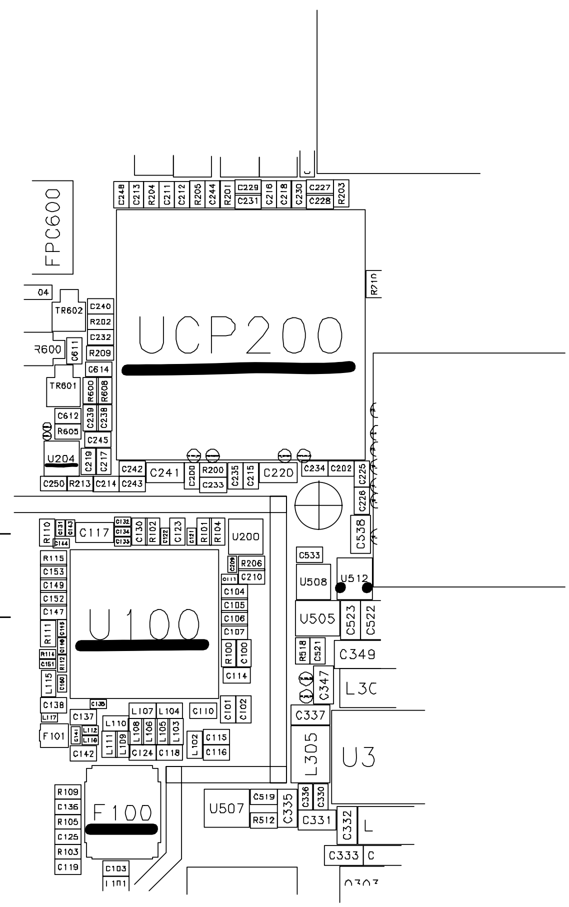

FPC600
UCP200
U100
F100
U200
U508
U505
U507
L305
U3
F105
PAM101
F107
PAM100
TCX100
TA100
RFS100

9-15. PCS Transmitter

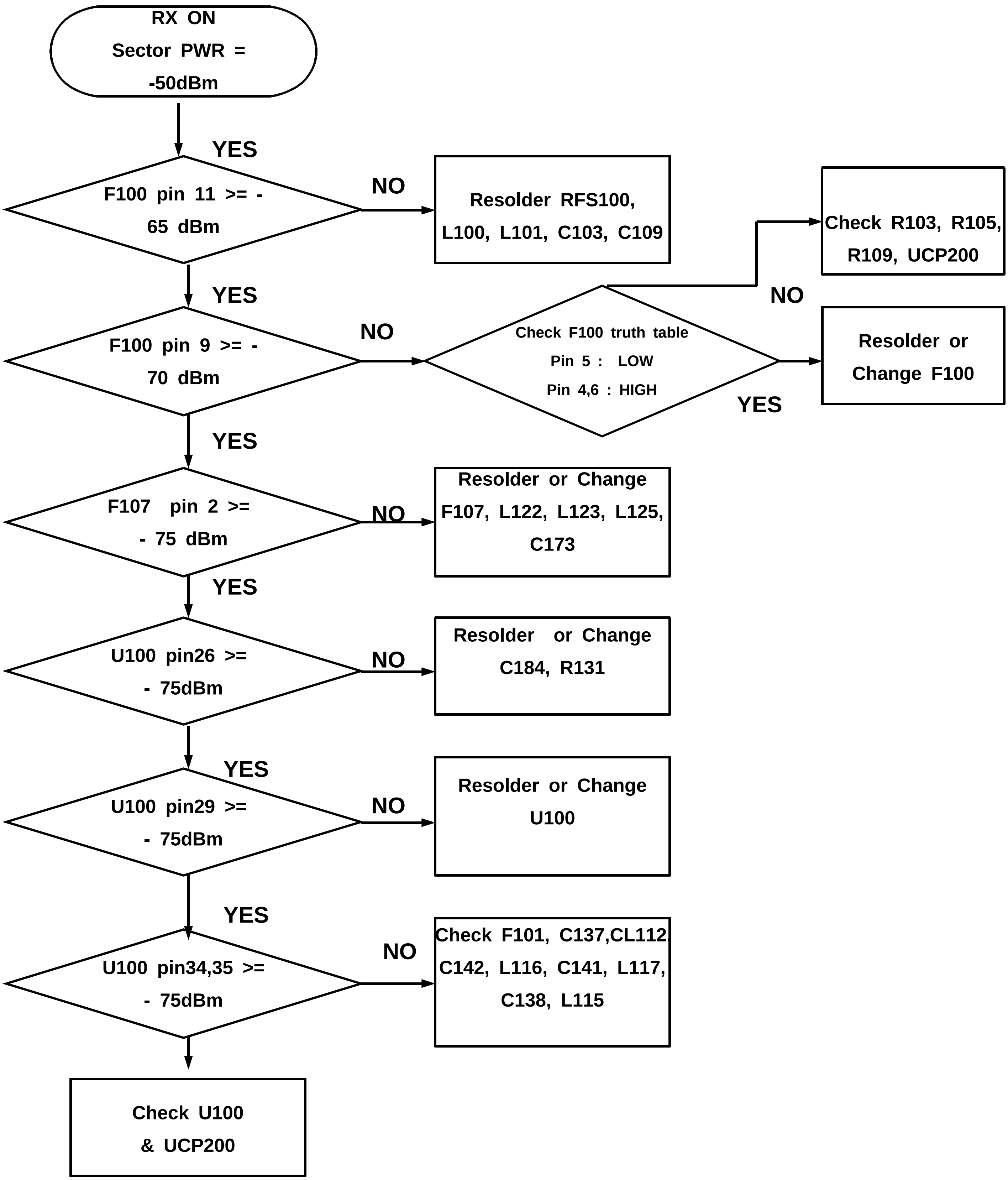


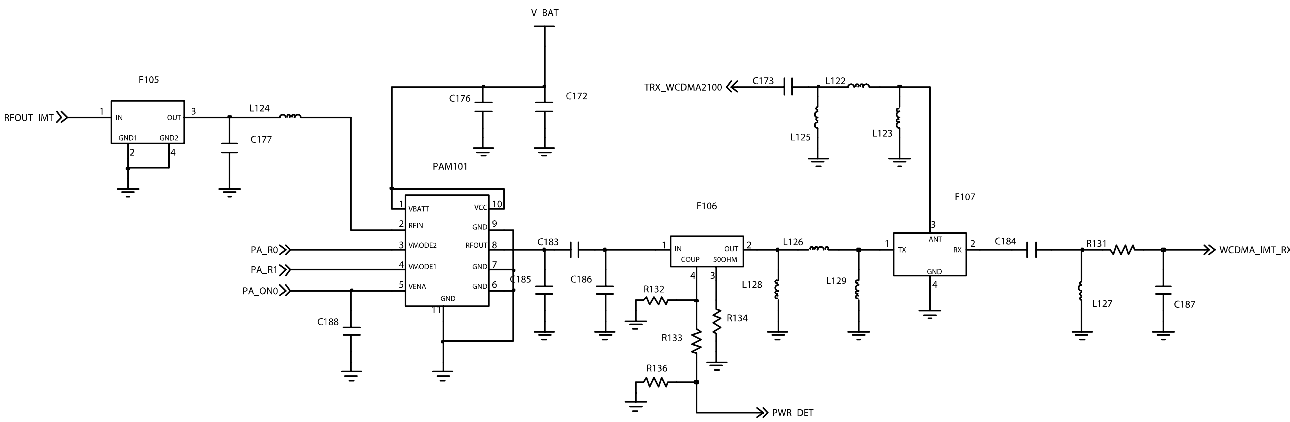

ANT100
RFS100
L100
C103
C108
C109
L101
RF_SMPS_2.6V
L102
C115
C116
F100
V_BAT
C120
TA100
TRX_WCDMA2100
GSM_ANT_SEL0_N
R103
C119
RX_EGSM900_N
RX_EGSM900_P
RX_DCS1800_N
RX_DCS1800_P
RX_PCS1900_N
RX_PCS1900_P
PAM100
GSM_PA_EN
RFOUT_DCS_PCS
R106
R107
R108
GSM_ANT_SEL1_N
R105
C125
C126
C127
L133
C129
L113
L114
GSM_PA_BAND
PA_RAMP+
R113
GSM_ANT_SEL2_N
R109
C136
C139
C140
C148
F102
RFOUT_GCELL_EGSM
R116
R117
R118

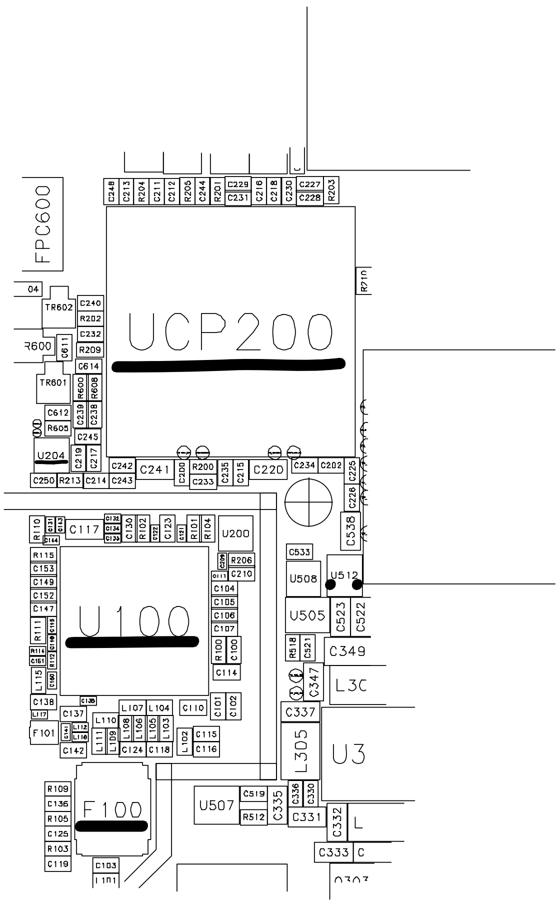

C177
F105
L131
C1006
TCX100
C172
PAM101
C176
C183
C185
F106
F107
PAM100
C113
R117
R116
R118
R107
R108
TA100
R113
C148
F102
L123
L122
C173
L125
C129
L114
C140
C126
L133
L113
C139
RFS100


FPC600
UCP200
TR602
R600
TR601
U204
U100
U200
C117
U508
U512
U505
C538
C349
C347
C337
L305
U3
F100
U507
C331

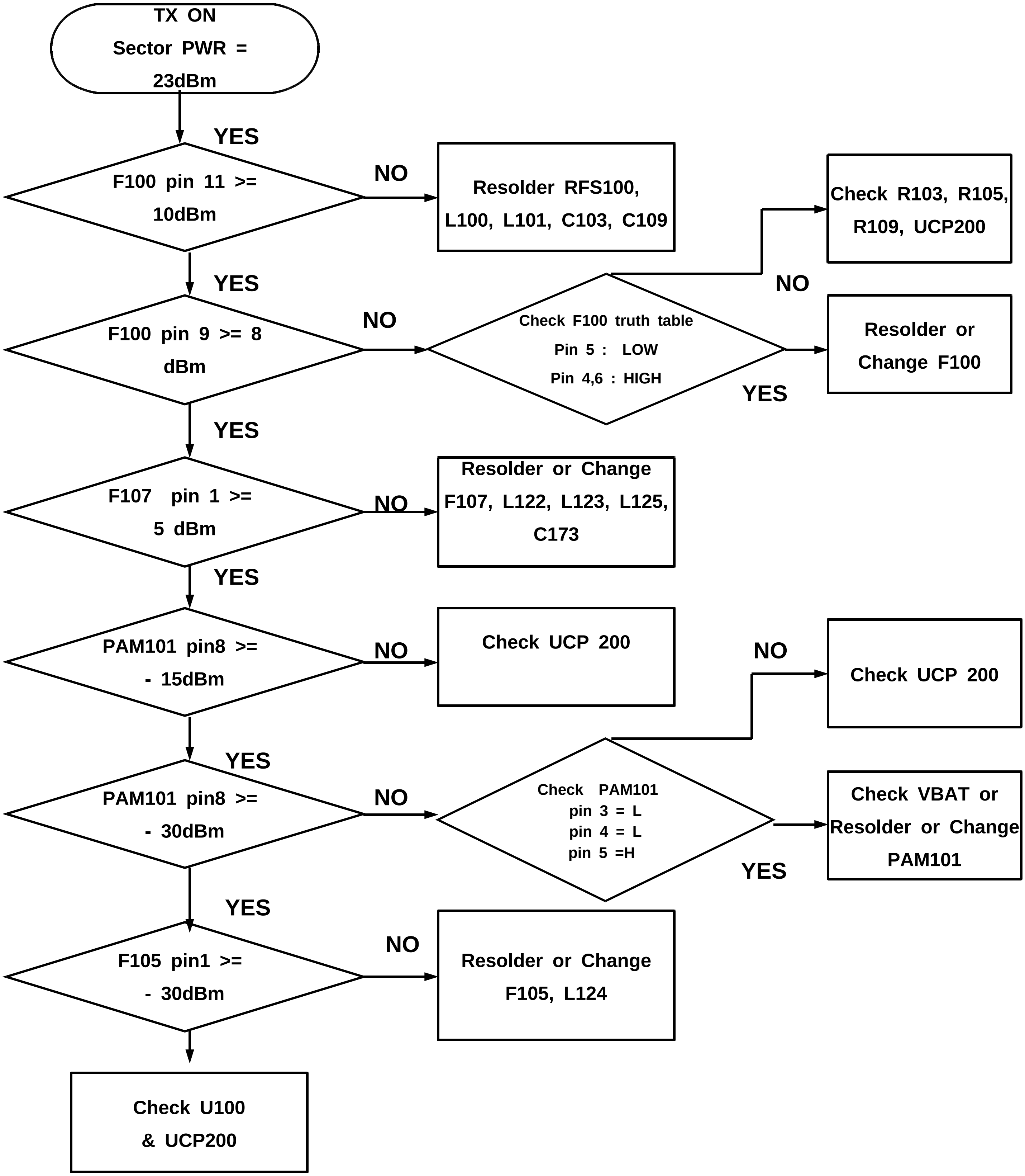
9-16. WCDMA Receiver

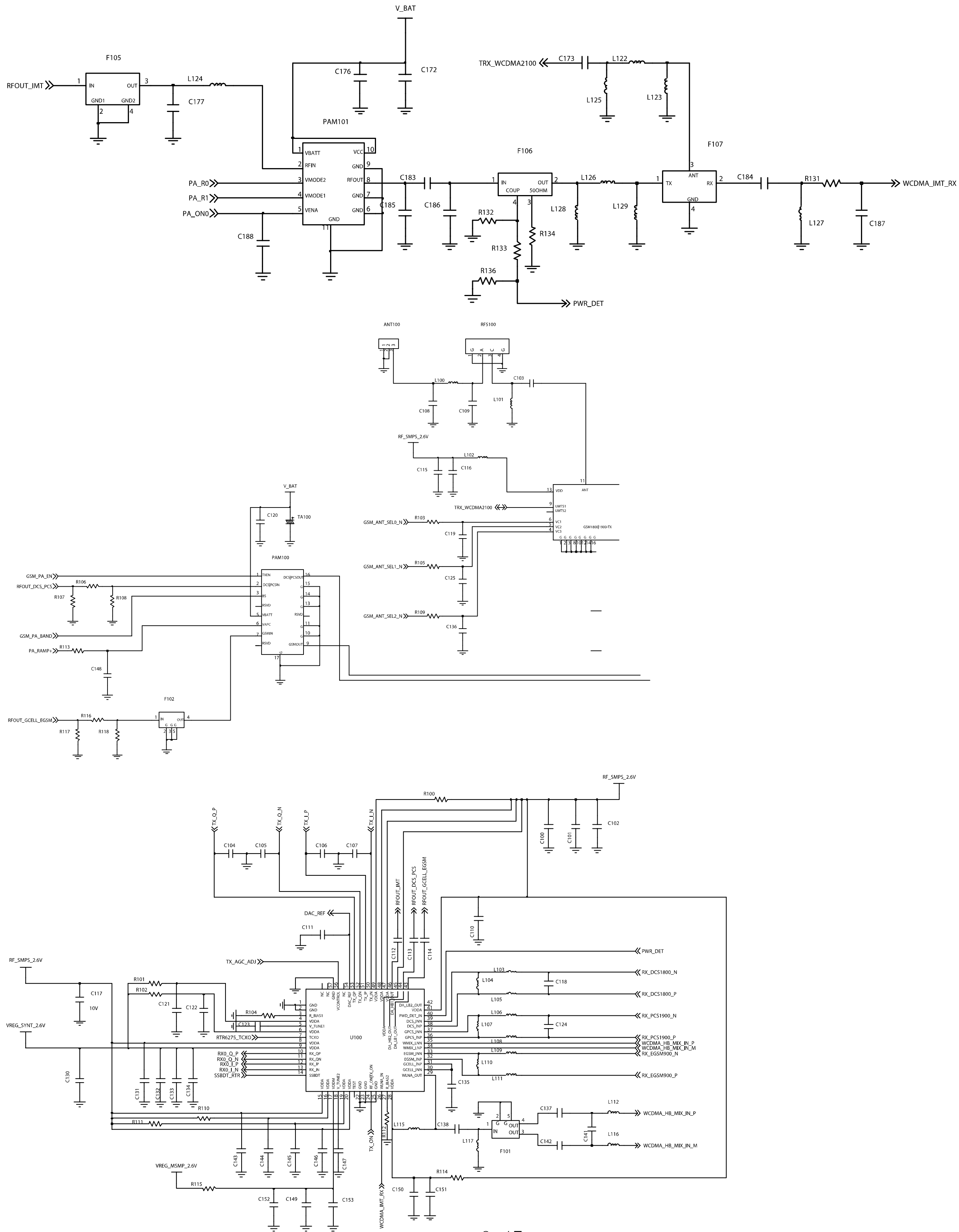


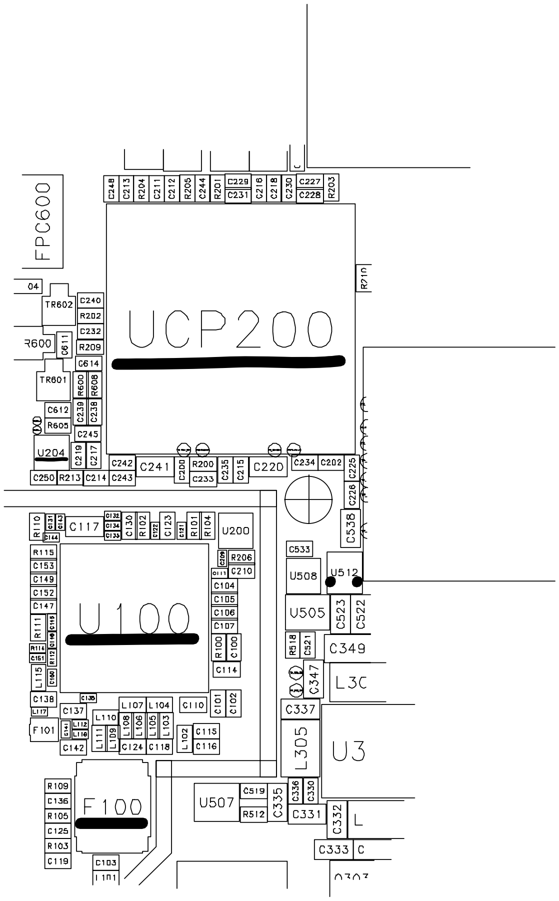

V_BAT
F105
RFOUT_IMT
L124
C177
C176
C172
PAM101
TRX_WCDMA2100
C173
L122
L125
L123
F107
F106
PA_R0
PA_R1
PA_ON0
C183
C185
C186
C188
R132
R133
R134
R136
L126
L128
L129
C184
R131
L127
C187
WCDMA_IMT_RX
PWR_DET


FPC600
UCP200
U100
F100
U200
U508
U505
U507
L305
U3

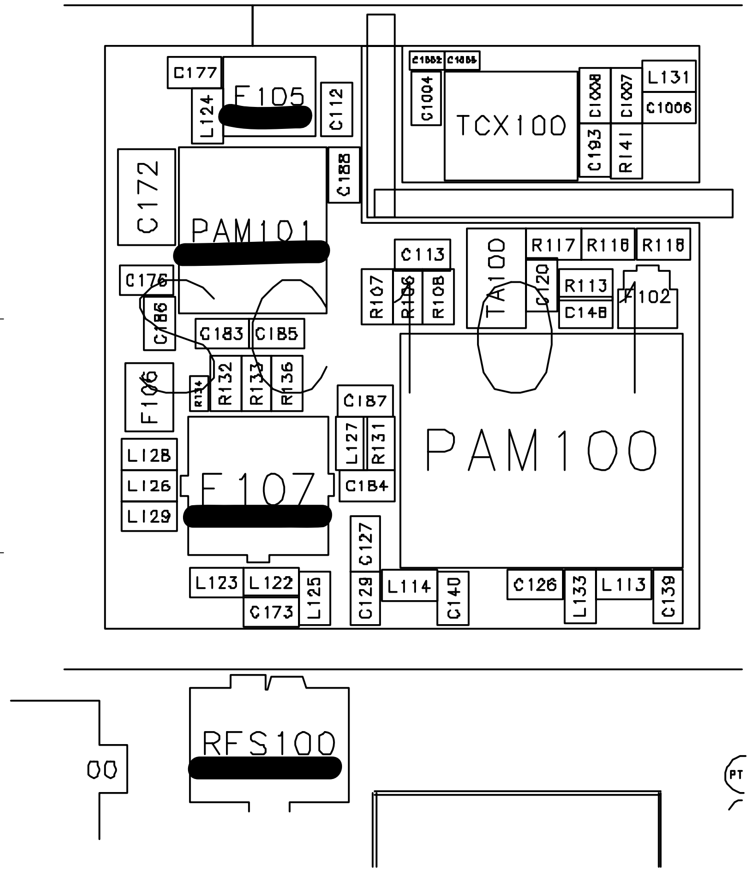
9-17. WCDMA 2100 Transmitter







FPC600
UCP200
U100
F100
U200
U505
U507
L305



F105
TCX100
C172
PAM101
TA100
PAM100
F106
F107
F102
RFS100

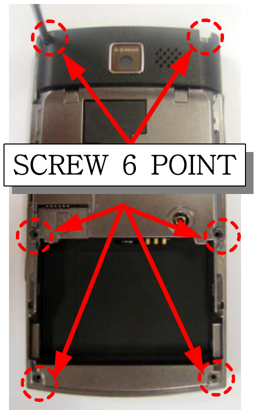
10. Reference data

Reference Abbreviate

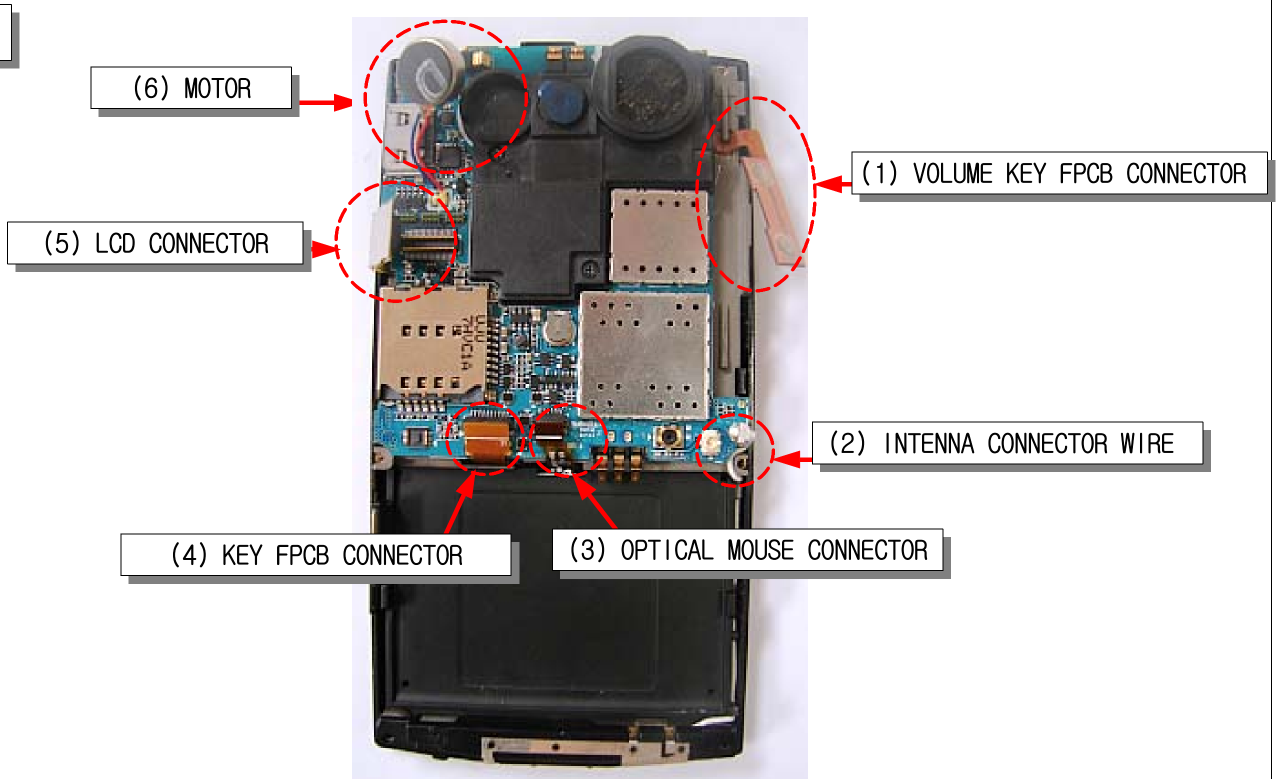
- **ARFCN** : Absolute Radio Frequency Channel Number
- **BGA** : Ball Grid Array
- **DCS** : Digital Communications System
- **DL** : Downlink
- **EDR** : Enhanced Data Rate
- **EFS** : Embaded File System
- **EGSM** : Enhanced Global System for Mobile Communications
- **FTP** : File Transfer Protocol
- **HPSK** : Hybrid Phase Shift Keying
- **HSDPA** : High Speed Downlink Packet Access
- **Mcps** : Mega-chips per second
- **MMS** : Multimedia Messaging Service
- **MSK** : Minimum Shift Keying
- **OBEX** : OBject EXchange
- **PBA** : Panel Board Assembly
- **PCS** : Personal Communication System
- **PIM(S)** : Personal Information Management (System)
- **QPSK** : Quadrature Phase Shift Keying
- **RNDIS** : Remote Network Driver Interface Specification
- **RSS** : Received Signal Strength
- **SAW** : Surface Acoustic Wave
- **SMS** : Short Message Service
- **UL** : Uplink
- **USB** : Universal Serial Bus
- **WCDMA** : Wideband Code Division Multiple Access

11. Disassembly and Assembly Instructions

11-1. Disassembly Instructions

1	2
	
Unscrew 6 points in the rear case. - SCREW 6 POINT	Remove rear cover. - Separate the locker by inserting the disassembly apparatus into the gap between the front and the rear.

3



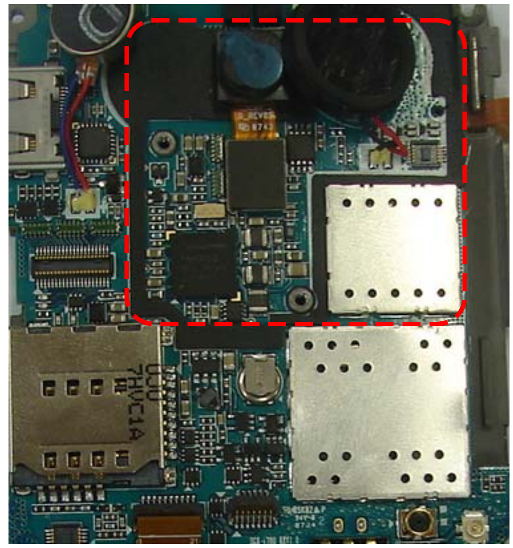
(1) VOLUME KEY FPCB CONNECTOR (2) INTENNA CONNECTOR WIRE (3) OPTICAL MOUSE CONNECTOR
(4) KEY FPCB CONNECTOR (5) LCD CONNECTOR (6) MOTOR
Detach FPCB. Separate the MOTOR.

4



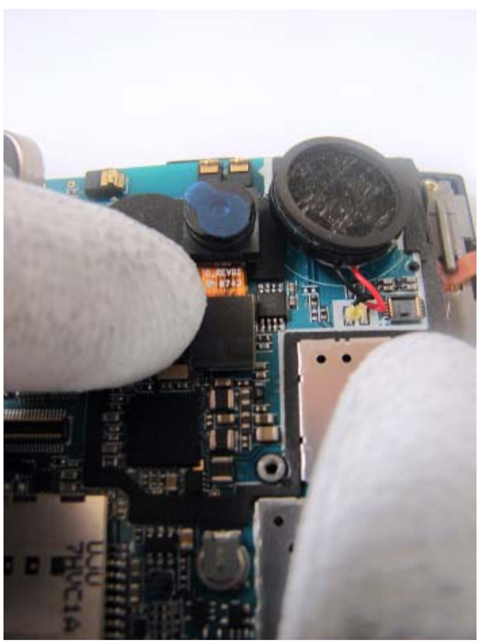
Unscrew 2 points

5



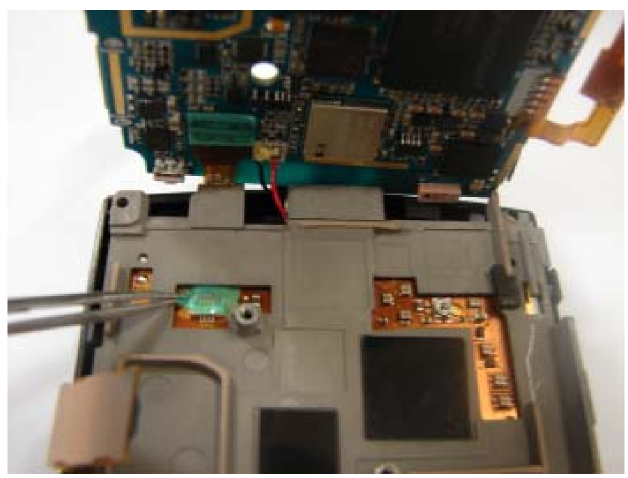
Separate the speaker bracket.

6



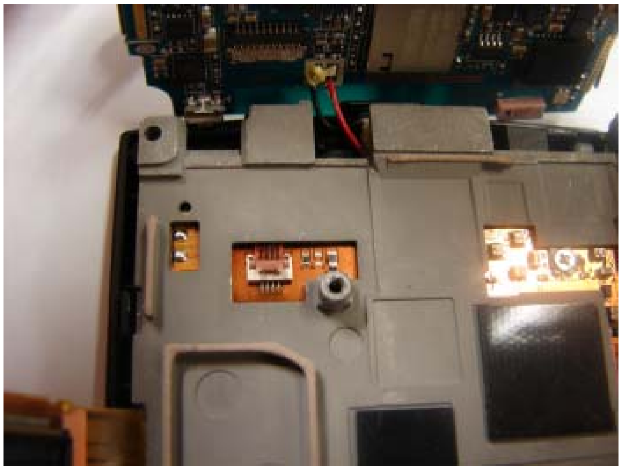
Separate the 2M camera.

7



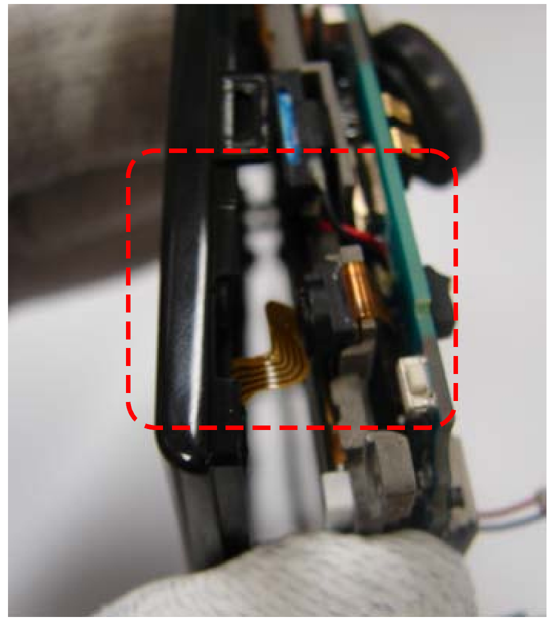
Remove the insulation tape after raising the PBA.

8



Open the TSP WINDOW CONNECTOR LOCKER.

9



Pick out the tsp window connector from the space between LCD and PBA BRACKET.

10

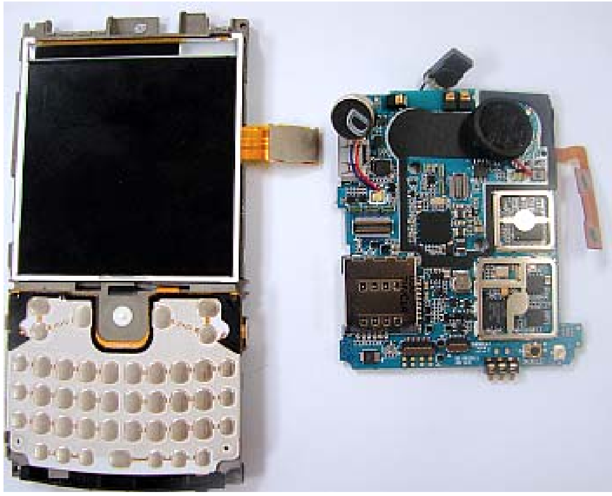
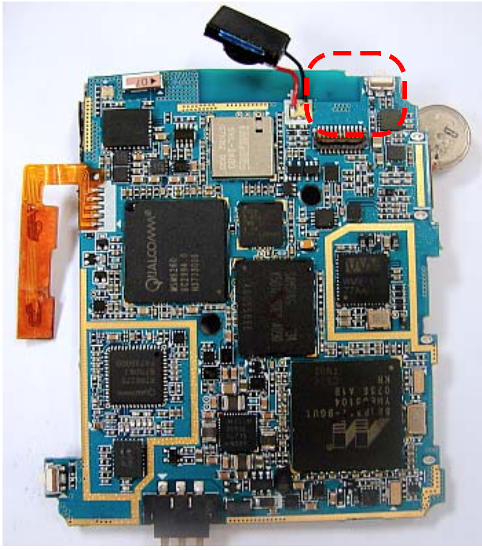
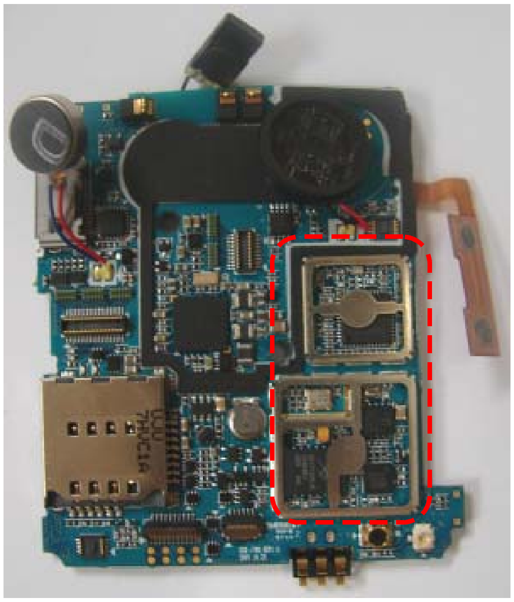
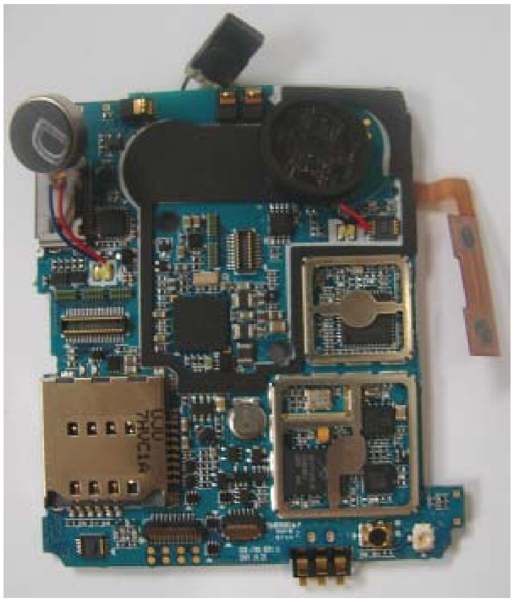


Separate FRONT and PBA BRACKET ASS'Y.

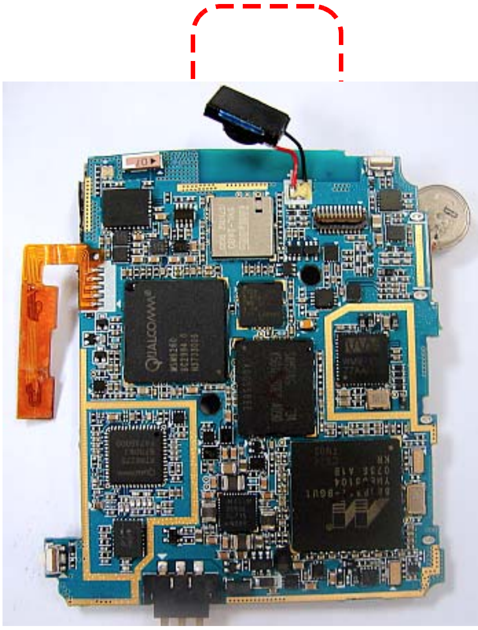
11



Separate RECEIVER and VGA CAMERA.

12	13
	
Separate PBA BRACKET and PBA.	Separate the VGA CAMERA after removing the insulation tape.
14	**15**
	
Detach two SHIELD COVERS.	Separate the MOTOR and SPEAKER after RE-SOLDERING.

16



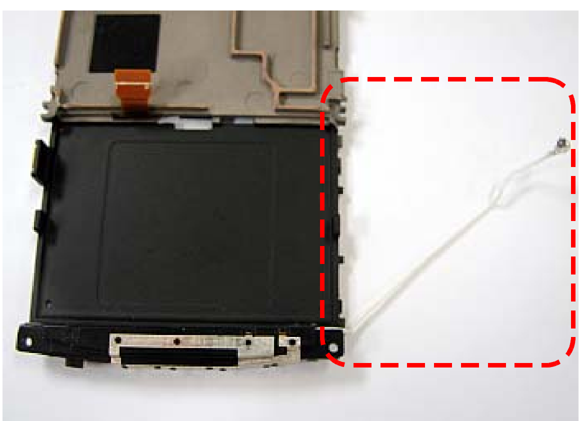
Separate the MOTOR and SPEAKER after RESOLDERING.

17



Separate LCD and PBA BRACKET.

18



Separate PBA BRACKET and INTENNA WIRE.

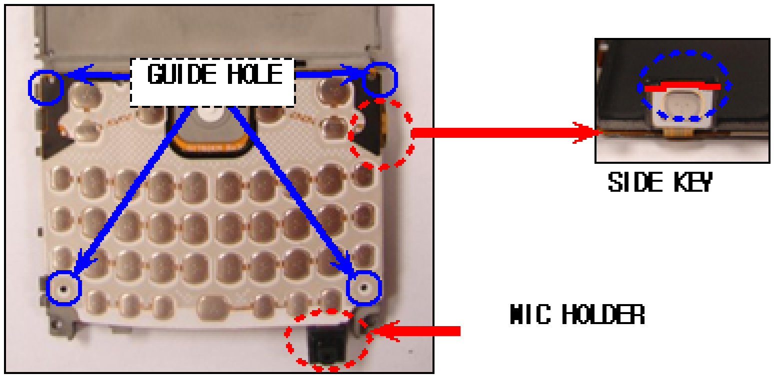
19



Remove the INTENNA.
Notice the MIC HOLDER.

11-2. Assembly Instructions

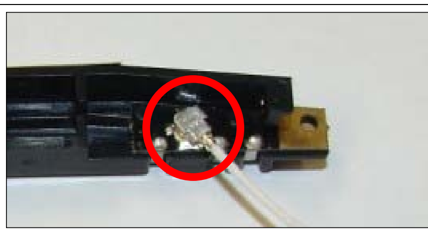
1



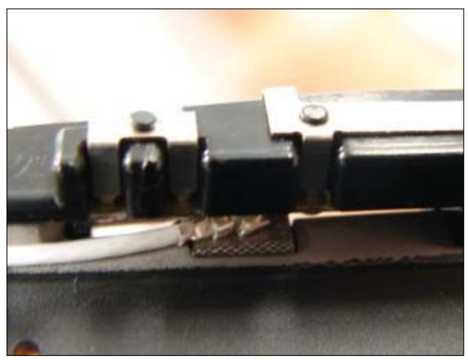
Attach KEY FPCB

1. Remove the sticker of the KEY FPCB.
2. Attach the KEY FPCB standardizing guide hole.

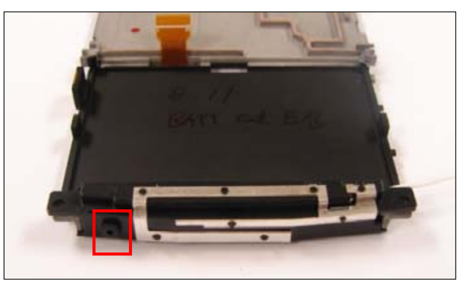
2



< 1. INTENNA CONNECTOR 체결 >



< 2. GOLD GASKET과 INTENNA CONNECTOR 접촉 확인 >



< 3. INTENNA ASSEMBLY >



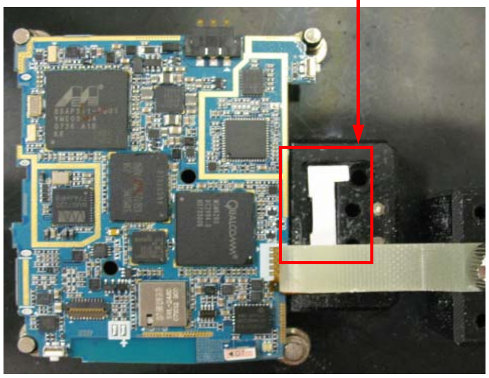
< 4. INTENNA CONNECTOR WIRE 안착 >

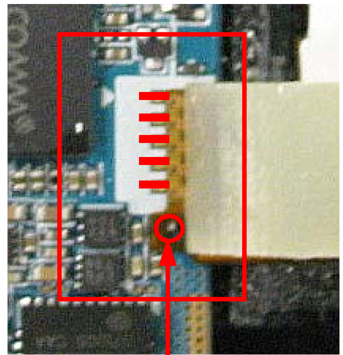
INTENNA ASSEMBLY

1. Press the intenna conector on intenna perpendicularly.
2. Attach INTENNA on PBA BRACKET.
   Make sure the contact between GOLD GASKET andINTENNA CONNECTOR.
3. MIC HOLDER must be settled in INTENNA HOLE.
4. Attach the NTENNA CONNECTOR WIRE side of the PBA BRACKET. (refer to the picture)

3

Do not remove the sticker





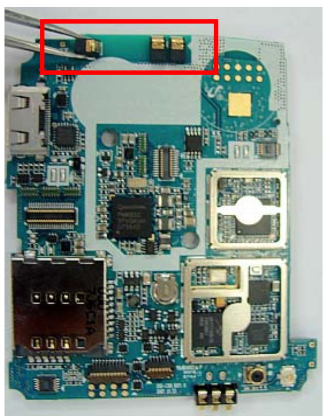
Settle standardizing the hole

VOLUME KEY FPCB SOLDERING

1. Settle the VOLUME KEY FPCB using the GUIDE HOLE and SOLDER the FPCB.

※ Notice SHORT and getting loose
   iron temperature : 350~380'

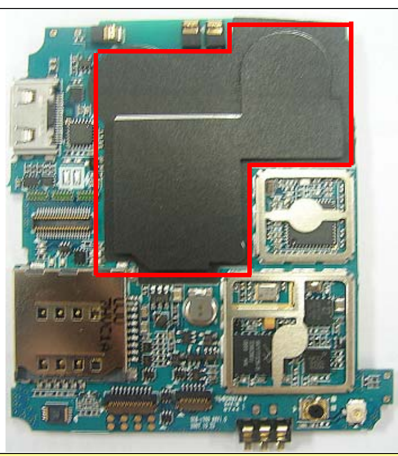
4

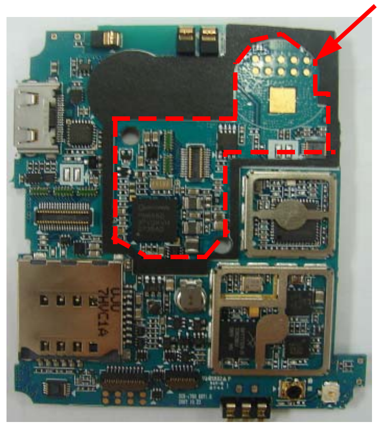


Insert ANTENNA CONTACT RUBBER

1. Insert rubber into the lower end of the INTENNA CONTACT.

5



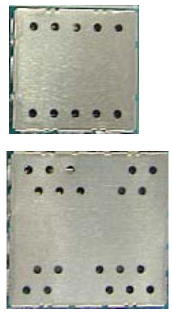


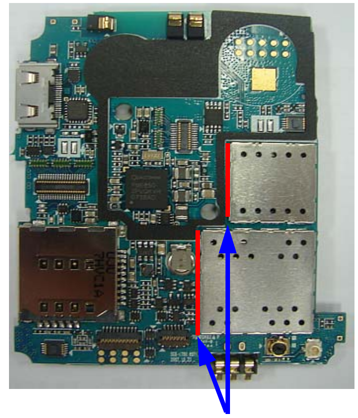
the inner removal part

Attach the PORON SPEAKER BRACKET

1. Attach the PORON SPEAKER BRACKET following the guide line of the PCB
2. Remove the inner removal part of the PORON

6





notice the right insertion direction

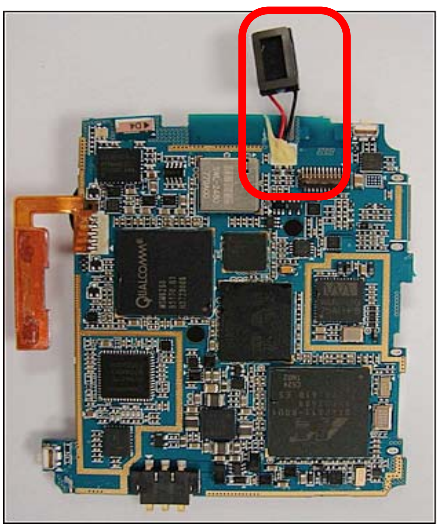
insert from the left side.

Attach SHIELD COVER

1. Attach SHIELD COVER from the left side.

7

RECEIVER SOLDERING



MOTOR, SPEAKER SOLDERING



RECEIVER, MOTOR, SPEAKER SOLDERING

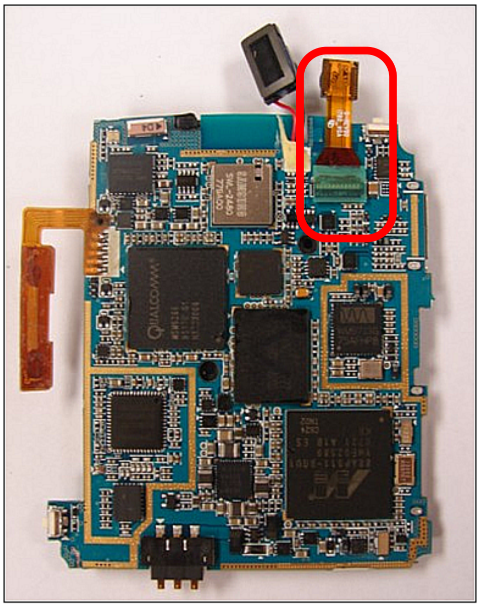
1. Solder the RECEIVER on the TOP side.

2. Solder the MOTOR and SPEAKER on the BOTTOM side.

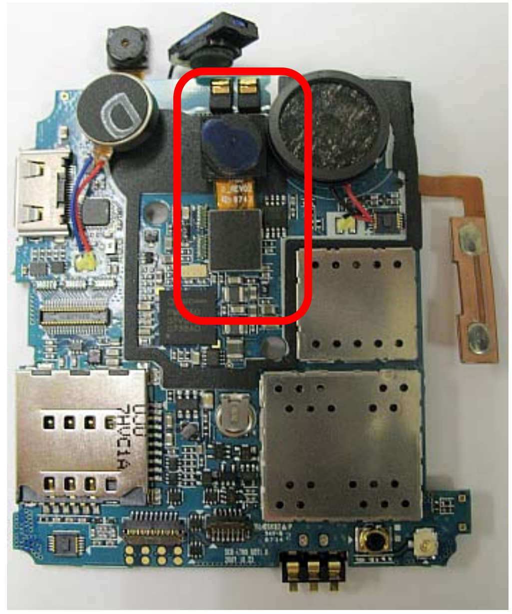
※ Notice SHORT and getting loose
iron temperature : 350~380'

8

attach VGA CAMERA



attach 2MEGA CAMERA

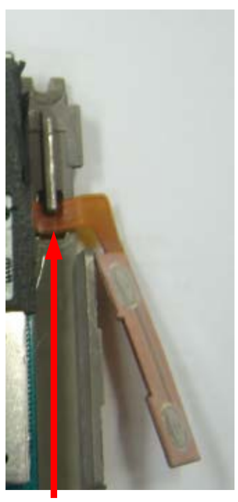


Attach CAMERAs

1. Inset the VGA CAMERA (standardize the FPCB SILK LINE) and attach the insulation tape after closing the LOCKER.
2. Press the 2MEGA CAMERA.

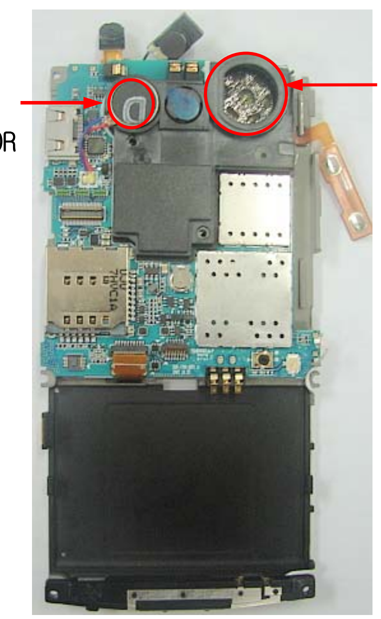
9





inset the FPCB into the bracket FIRST.

attach the MOTOR

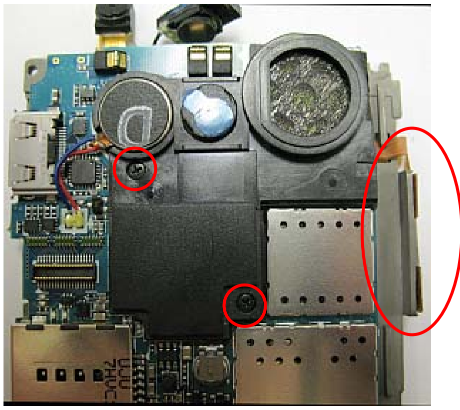


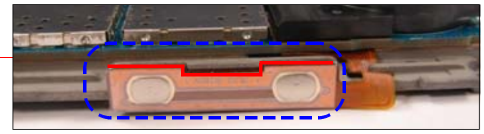
notice the SPEAKER settling

Settle PBA / Attach the SPEAKER BRACKET

1. Inset the FPCB into the BRACKET.
2. Settle the PBA into the PBA BRACKET
3. Attach the MOTOR after assembling the SPEAKER BRACKET.

10



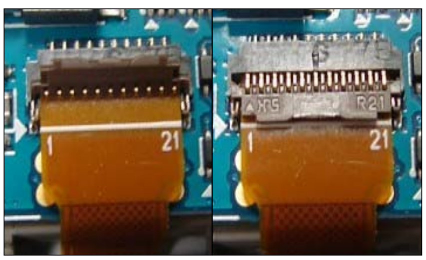


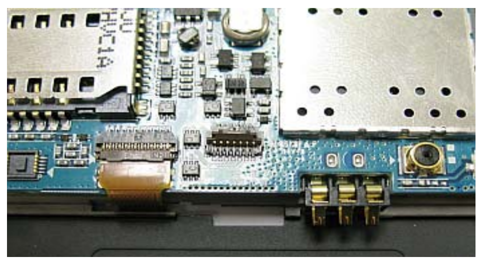
SCREW / Attach VOLUME KEY FPCB

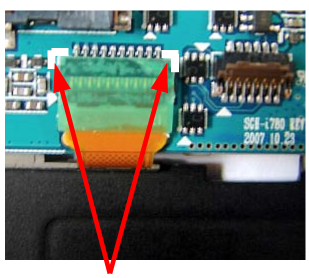
1. SCREW 2 POINTS. (SCREW SIZE : M1.4,L3.5, TORQUE : 1.1~1.3 Kgf.cm)

2. Attach the VOLUME KEY FPCB on the PBA BRACKET following the picture.

11





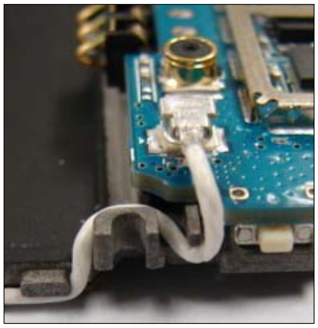


Connect KEY FPCB CONNECTOR

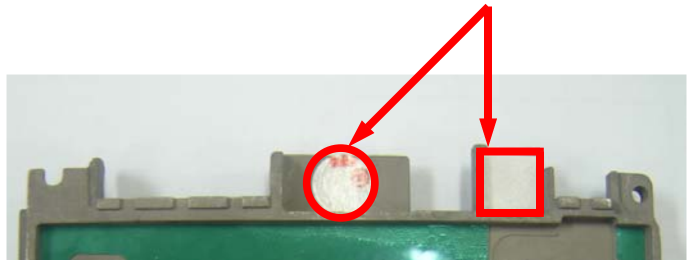
1. Close the LOCKER (SILK LINE of the FPCB must be placed end of the LOCKER)

2. Attach the insulation tape standardizing the CONNECTOR upper SILK LINE

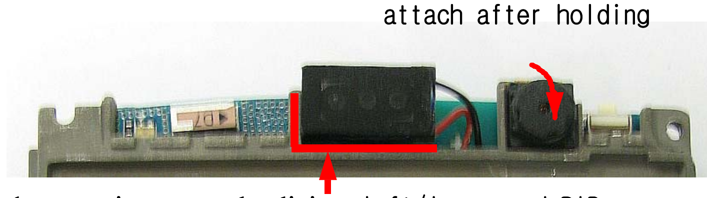
12



remove sticker



attach after holding

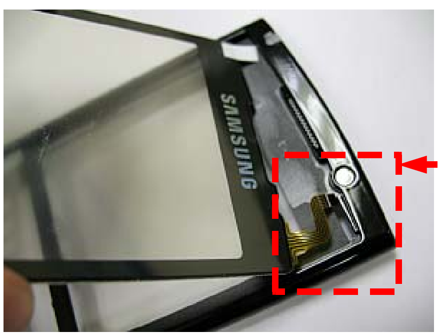


attach the receiver standardizing left/lower-end RIB

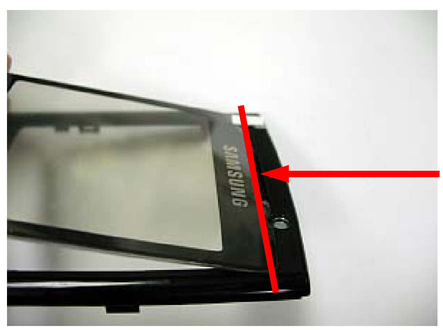
Connect the INTENNA WIRE CONNECTOR / attach the RECEIVER and VGA CAMERA

1. Press the INTENNA WIRE CONNECTOR perpendicularly
2. Attach the RECEIVER and VGA CAMERA after removing stickers.

13



insert TSP WINDOW
FPCB CONNECTOR into the FRONT hole



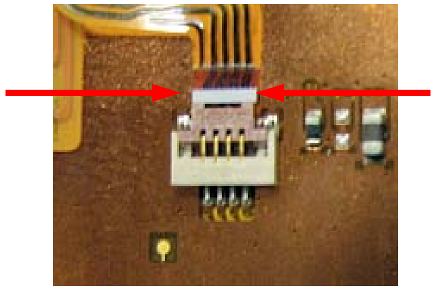
attach the TSP WINDOW on FRONT
standardizing the upper line

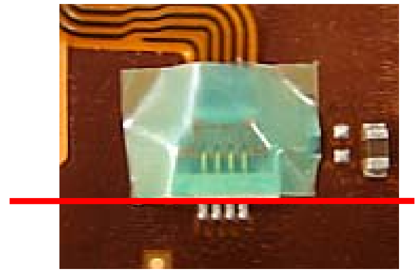
Attach the TSP WINDOW on FRONT

1. Remove the sticker of FRONT WINDOW
2. Insert TSP WINDOW FPCB CONNECTOR into the FRONT hole
3. Attach the TSP WINDOW on FRONT standardizing the upper line

14



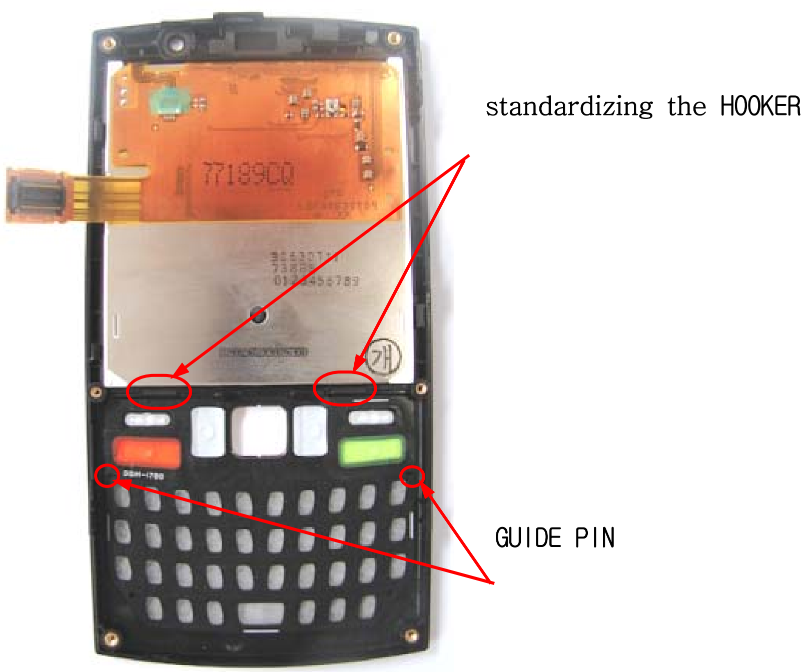




Settle LCD / Connect TSP WINDOW CONNECTOR

1. Settle LCD on FRONTstandardizing the upper line
2. Close the LOCKER (FPCB SILK LINE must be placed end of the LOCKER)
3. Attach the insulation tape standardizing the CONNECTOR lower end

15



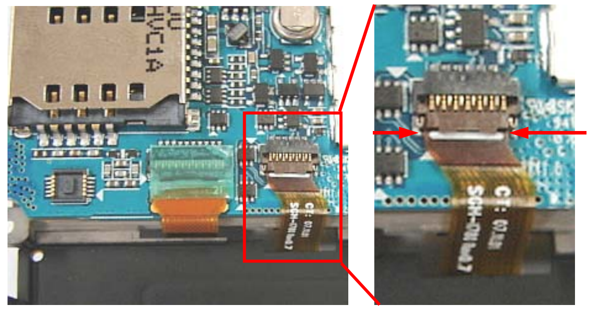
KEY PAD

1. Settle the KEY PAD standardizing the HOOKER.
2. Make sure the key pad attachment.

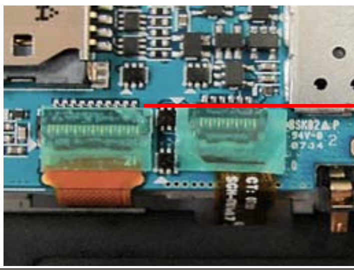
16



inset the OPTICAL MOUSE FPCB
into the BRACKET hole



standardizing the SILK LINE



attach the insulation tape
standardizing the CONNECTOR upper side.

OPTICAL MOUSE

1. Inset the OPTICAL MOUSE FPCB into the BRACKET hole
2. Close the LOCKER after inserting the CONNECTOR
3. Attach the insulation tape standardizing the CONNECTOR upper side.

17



notice interference between
VOLUME KEY FPCB and FRONT RIB

connect the LCD CONNECTOR





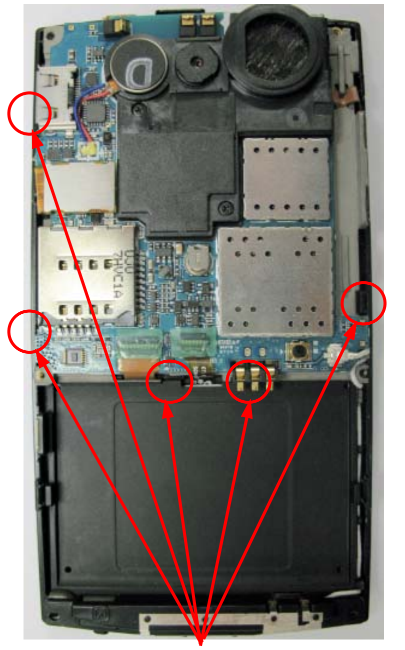
notice interference between
VOLUME KEY FPCB and FRONT RIB

Put the PBA BRACKET ASS'Y on FRONT

1. Put the PBA BRACKET ASS'Y on FRONT (right / upper side FIRST)
   Notice interference between VOLUME KEY FPCB and FRONT RIB
2. Connect LCD CONNECTOR

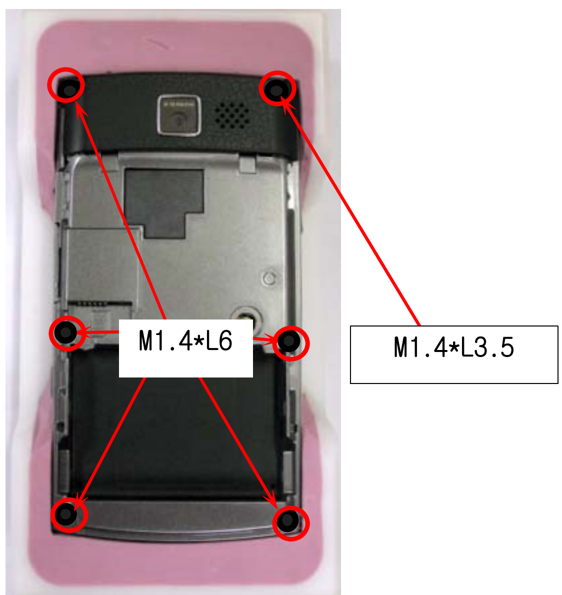
16

HOOKER 5 POINT



Make sure the HOOKER 5 POINT attachment with accuracy

17



Assemble the rear case / SCREW 6 points

1. Assemble the rear case and SCREW 6 POINTS
   (SCREW SIZE → M1.4*L6 : 5 POINT, M1.4*L3.5 : 1 POINT)
   SCREW TORQUE : 1.1~1.3 Kgf.cm